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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

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A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

EDITED BY

PROFESSOR G. F. STOUT,

WITH THE CO-OPERATION OF PROFESSOR E. B. TITCHENER, AMERICAN EDITORIAL REPRESENTATIVE, AND OF PROFESSOR WARD, PROFESSOR PRINGLE-PATTISON, DAVID MORRISON, M.A., AND OTHER MEMBERS OF AN ADVISORY COMMITTEE.

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PSYCHOLOGY AND PHILOSOPHY

I.—THE IDEA OF GOD: A REPLY TO SOME CRITICISMS.

By A. S. Pringle-Pattison.

Some reply will be expected from me to Dr. Rashdall's criticisms of certain of my positions in the *Idea of God*.[1] As Dr. Rashdall says, there is much ground which we hold in common, yet there are some of his expressions to which I cannot easily reconcile myself, just as there are expressions of mine to which he pointedly objects. It will be impossible for me to cover all the ground traversed by him in his article, but if I take up the main points in the order in which he brings them forward, I may succeed in clearing away misconceptions or in re-defining my positions in such a way as to meet valid objections to the form in which they are stated in my book. In so doing I will take the liberty of referring at the same time to any other relevant criticisms on these points which have come to my notice.

The first point raised by Dr. Rashdall concerns my position in "the old controversy between Idealism and Realism". He is not inclined to accept the distinction I draw between "Idealism" in the broad historic sense of a spiritual theory of the universe and what I have called, for the sake of distinction, "subjective idealism" or "mentalism," and he thinks that I have over-emphasised the reality of the object. "After all," he says, my idealism is "not complete or thoroughgoing," inasmuch as I still talk about the "independent existence of the object". If I had "recognised as fully as Green or Mr.

[1] Mind, July, 1918.

Bradley or Prof. Bosanquet the impossibility of a thing possessing real existence independently of consciousness," it would have helped to guide my steps in the right way. Dr. Rashdall has, in several of his writings, expounded what he calls "the ordinary idealistic argument by which it is shown that all that we mean by a thing is unintelligible apart from Mind;" and in his British Academy paper on "The Metaphysic of Mr. F. H. Bradley," he extols Mr. Bradley as "the most thoroughly convinced and the most convincing, I venture to think the most irrefutable, of Idealists. In Mr. Bradley we have an Idealist who is not afraid or ashamed of Idealism. Mr. Bradley is not a 'soft Idealist' who, after disposing of Materialism by arguments borrowed from Berkeley or Kant, suddenly, when faced with the difficulties of his own position and its antagonism to so-called Common sense, turns round and condemns under the name of 'subjective Idealism' the inevitable inference 'if nature does not exist apart from Mind, then nothing really exists but Mind and what is *for* Mind'. Mr. Bradley is a genuine, hard, impenitent Idealist, who over and over again asserts as his fundamental formula 'There is but one Reality, and its being consists in experience'.[1] . . . It turns out then as the result of examination that matter, as we know it, can always be analysed away into a form of conscious experience" (pp. 3-4). "Its reality is that of actual or possible experience" (p. 15).

I am afraid that these passages—many of the phrases at all events—exemplify just that identification of Idealism with Berkeleyan Mentalism which I deprecate. I deprecate the binding up of the two positions because the mentalistic argument has for a long time appeared to me to be unconvincing, to be, in fact, as I have argued, essentially circular. And I was interested recently to find Green himself pressing the same criticism in a review of John Caird's *Philosophy of Religion*. Principal Caird had been arguing against materialism that "to constitute the existence of the outward world . . . you must needs presuppose a consciousness for which and in which all objective existence is. To go beyond, or to attempt to conceive of an existence which is prior to and outside of thought, a 'thing in itself' of which thought is only the mirror, is self-contradictory inasmuch as that very thing in itself is only conceivable by, exists only for, thought. But while it is true that the priority of thought, or the ulti-

[1] Or as he quotes later in the same paper: "Sentient experience is reality and what is not this is not real," "the real is nothing but experience," "everything is experience": "there we have the voice of the genuine Idealist" (p. 10).

mate unity of thought and being, is a principle to doubt which is impossible, seeing that, in doubting it, we are tacitly asserting the thing we doubt, yet it is not *my* thought in which I am shut up . . . for I have the power of transcending my own individuality and the world of objects opposed to it, and of entering into an idea which unites or embraces both. . . . The real presupposition of all knowledge, or the thought which is the *prius* of all things, is not the individual's consciousness of himself as an individual, but a thought or self-consciousness which is beyond all individual selves, which is the unity of all individual selves and their objects, of all thinkers and all objects of thought. . . . We might even say that, strictly speaking, it is not we that think, but the universal reason that thinks in us. . . . Our whole conscious life is based on a universal self-consciousness, an absolute spiritual life, which is not a mere subjective notion or conception, but which carries with it the proof of its necessary existence or reality." In view of this argument, so familiar to us in the writings both of the Principal and his brother, Green confesses to "an uneasy sense that it is little likely to carry conviction". It will seem to the reader, he says, that the author confuses essentially different propositions: "the proposition that a thing is only conceivable by thought—which he will say is an identical one, for by thought we mean the faculty that conceives—with the proposition that the thing only exists for thought; the proposition, again, that no object can be *conceived as existing* except in relation to a thinking subject, with the proposition that it cannot exist except in that relation".[1] What is this but the criticism of Berkeleyan idealism which the modern realist has condensed into the phrase "the egocentric predicament"? It is plain, therefore, that, whatever we may think of Green's own method of approaching the question, he is far from being satisfied with "the ordinary idealistic argument," which Dr. Rashdall finds so convincing.

Dr. Rashdall, to judge from the passages I have quoted above, appears to accept as the basis of his Idealism the Berkeley-Mill-Bain analysis of matter into forms of conscious

[1] *Works*, vol. iii., pp. 138-144. It is true that Green does not profess to endorse all the criticism which, in this context, he puts in the mouth of an unbiassed reader, but he subsequently adopts the gist of it as true, for he says explicitly, in contrasting Caird's method of argument with his own, "To assume, because all reality requires thought to conceive it, that therefore thought is the condition of its existence is, indeed, unwarrantable," and he expressly condemns the "jump" from "thought as a subjective process" to "an absolute spiritual life which, as God, must at the same time be or make the reality of the world".

process. Matter is "analysed away," into actual and possible experience. Hence as Berkeley expressed the position when it first dawned upon him "nothing properly but persons, *i.e.*, conscious things, doth exist; all other things are not so much existences as manners of the existence of persons". Or in a neat phrase of Prof. Taylor's at the stage when he wrote his *Elements of Metaphysics*, "reality is exclusively composed of psychical fact". Now there is nothing which I believe to be epistemologically more unsound than this identification of the knower's knowledge or experience with the reality of the object he knows. Knowledge, experience, consciousness —all such terms—contain in their very essence a reference beyond the subjective process to a reality known or experienced in that process. They all point beyond themselves to an object whose reality is not constituted by the knowing but presupposed by it, and in that sense independent of it. This is, I hold, the irreducible truth in Realism, and it will be found that the very language used by the Mentalists often betrays the confusion on which their position rests. When, for example, Dr. Rashdall says "Matter, *as we know it*, can always be analysed away into a form of conscious experience," a critic such as Green makes use of might easily retort that the proposition is in effect an identical one, for "matter, as we know it," is taken in it as equivalent to "our knowledge of matter". Or, again, we are told, in the present article, that if we think of matter in the sense of the Idealist, we must think of it as "existing only in and for Mind". But there is, or may be, a great difference between "in" and "for". An object, when sensed or in any way experienced, may intelligibly be said to exist *for* the mind in question or to be present *to* it; but it is contrary to philosophical and scientific analysis no less than to common sense to describe the object as *in* the mind. Such a form of expression really depends upon the unfounded (and, let us hope, now exploded) dogma that we cannot know a thing without actually *being* the thing, or unless the thing migrates over into us and becomes part of our own being. From this follows, in the first instance, the doctrine of Representative Perception, which in turn gives place to Subjective Idealism. But, if we refuse to yield to this initial prejudice at the outset, we shall not be tempted to sacrifice the reality of the object by reducing it to a process in the knowing mind. We shall be able to recognise that the reality of the fact known is everywhere the precondition of the fact of our knowing it and not *vice versa*.

This is so obvious in our own case that the second word

of the Mentalist is always the retractation of his first. He hastens to assure us that the identification of the object with the mental experience is of course not true in the case of any finite mind whose experiences come and go, have a beginning and an end. To make the theorem true we have to imagine the all-sustaining experience of a divine or cosmic consciousness. But if this transference of the issue appears at first sight to make the argument more plausible, that is only, as I have argued, because in our statement of the new case we have insensibly altered the conditions. Under one set of phrases or another, we attribute to such a cosmic consciousness a productive or creative activity which confers upon the objects of its thought just that stability and relative independence which we recognise in the object of our own knowledge, and in virtue of which these cosmic objects, as I may call them, are supposed to be capable of becoming common objects to any number of finite minds. But even so the theory immediately breaks down on closer examination, for, to give it the meaning which makes it persuasive, it implies, in the case of any so-called object, the identity, or at least the complete resemblance, of the divine and the human mode of experience. But how can we identify our own sense-experience of the external world with the mode in which Nature enters into a divine experience? Hence the theory tends to change its form. "The object and the sensation," are no longer taken, in Berkeley's phrase, as "the same thing"; the sense-experience of the finite consciousness is represented as the immediate result of the divine Will, the only true cause. So Dr. Rashdall speaks later in his article of God as "willing all the events of the world," and "causing the laws of nature," describing this view expressly as his own "way of thinking of God" (p. 274). Now, whatever we may think of this new version on its merits, it is at least a different theory from that with which we started. The reality and independence of the object is now placed in the permanent exciting cause of the experience; and with this acknowledgment of an extra-mental reality, we have abandoned the principle on which Mentalism stands. The weakness of the new version is, of course, that the reference to bare Will does not explain the particularity—the nature—of the occurrences. But, seeing that what is willed is supposed to be consciously willed, the character of the events and what may be called the scheme of operations as a whole must be somehow present to the divine Mind; and that raises once more the question of "how". When Berkeley grapples intermittently with this question in *Siris*, his reflexions seem to be leading him to a view not far removed from Platonic Realism.

It was accordingly the epistemological falsity, as it seemed to me, of the mentalistic argument in its original form and the ambiguity of all the attempts to re-state it in cosmic terms—as well as the exiguous nature of the result attainable by such a mode of reasoning, even if its validity were granted—that made me anxious to keep my own argument free from such entangling associations. But I did not on that account intend for a moment to assert the metaphysical self-existence, as I may term it, of material things. Modern Realists probably tend as a rule to do so, but the idea of the universe as a mere aggregate of independent existences, whether these existences be minds or things, is to me ultimately unthinkable; and, of course, the materialistic form of such an idea—as if the universe consisted of "bits of unrelated stuff lying about"—is the precise antithesis of everything I have ever taught. "Essential relatedness" is the conception which I oppose to the figment of the unrelated (and therefore ultimately unknowable) thing in itself, on which I have poured unmitigated scorn. Things exist as they are known by mind, and they may be said to exist in order to be so known and appreciated. In this sense all things exist *for* mind, but my point is that they do exist; a thing is not itself "a form of conscious experience," a phase, that is to say, of the being of the experiencing mind. Finite minds require an environment by which they are shaped and from which they receive their content, and it is nonsensical to seek to represent the environment as a state or process of the mind itself. We do not dream of doing so in the case of the social environment; no form of Subjective Idealism has been consistent enough to "analyse away" other selves into forms of the conscious experience of the subject by whom they are known and whom they influence. Why, then, should we so treat that other environment of external nature, which presents itself so obviously to unsophisticated people as an independent reality with which they are in relation? My natural realism—which Dr. Rashdall is at liberty to call naïve, if he likes—consists, first of all, in refusing to obliterate this manifest distinctness in existence, as the Mentalistic argument constantly tends to do, and, secondly, in declining to follow the seductive example of the Pan-psychists who, while accepting a real independence or distinctness, transmute the apparently unconscious system of nature into a multitude of infinitesimally conscious centres. I admit, as I have just said, a certain seductiveness in their procedure, because, when we try to conceive or think ourselves into the mode of being of anything to which we attribute concrete

existence, we inevitably do "think ourselves" into it; we construct it on the model of our own self-centred being, though it may be at many removes. But my difficulty with Pan-psychism is that if we are in earnest with the spiritual or psychic nature of the monads, we lose once more, as in Mentalism, the idea of environment in the sense in which it seems to be involved in the existence of a finite spirit. In a sense, doubtless, it may be contended that Pan-psychism does provide an environment for the individual, to wit, the social environment constituted by all the other co-existing monads. But the social environment is, in our experience, based upon the natural. Spirits, for their individuation, self-expression and intercommunication, appear to require bodies and the system of nature in which these bodies are rooted; and to resolve these bodies and the whole material world into little minds is the beginning of an infinite progress. These little minds in turn imply some medium in which they are shaped and through which they can act. If, on the other hand, the monads of the lower class are psychical merely in name, behaving otherwise exactly as we usually believe unconscious material particles to behave, the theory becomes superfluous and we might as well have accepted the *prima facie* distinction recognised by the common-sense view.

Dr. Rashdall is right, then, in saying that upon my view "it is clearly impossible that at any time it could have been said with truth, 'There is nothing in the world but matter, whatever there is going to be,' or, 'Matter exists in and by itself'". I could not say so, because, although I believe in the reality of process, I do not believe in a process which consists in successive spurts of something out of nothing. The philosopher must take the universe as a whole, if he is truly to describe its nature; and it was the fundamental contention of my book that, if we take it from the side of process, we must take the process as a whole and not substantiate the earlier stages in abstraction from the culmination in which they receive their meaning. If we contemplate the process thus, I insisted that the overpowering impression gained is that of man as organic to the world and of the world as organic to man, that is to say, to the self-conscious reason first revealed in man. In a universe so regarded there is no self-existent thing in itself apart from its function in the whole; and the external world in particular, I argued, cannot be severed from the sentient and intelligent lives of which it is the matrix and the nurse. In a world whose central business is conceived as the making of souls unconscious nature assumes, I suggested, the character of means or intermediary

towards an end. It is, as it were, the medium of the divine creation of such conscious centres. This instrumental or mediating function of the material world, I concluded, was the larger idealistic truth which underlay the mentalistic form of Berkeley's argument, and it is a truth which may be held along with a frankly realistic attitude towards external nature. Just because I had so fully expounded the central position of Mind—building up that conclusion in my own way—I may in one or two instances have been rash in the phrases used to emphasise the trans-subjective reality of the perceived world. But I had assumed that statements made in the chapter in question as to the "independence" of the object would be understood in the particular reference in which they occur, namely, as denials of the Mentalistic theory and not as overriding or recanting the fundamental thesis of the volume. In the one or two cases in which critics have shown that such misconception is possible, I will take the first opportunity of amending the unguarded phraseology, while maintaining the doctrine of the chapter unaltered, as I have explained it afresh in the foregoing pages.

The second point with which Dr. Rashdall deals is the relation between finite centres of consciousness and the supreme Spirit. Although, as he suggests, the real difference between us here is probably slighter than appears, it was almost entirely in this reference that I cited Dr. Rashdall's statements and ventured to criticise his modes of expression. The question is a supremely difficult one, and as several of my most friendly critics have found difficulties and inconsistencies in my own statements, this opportunity of returning to the subject is not unwelcome.

Dr. Rashdall begins by referring to my failure to distinguish between God and the Absolute, and Prof. Bosanquet, from a different point of view, comments on the same fact. The fullest criticism of my terminology in this respect occurs in the course of a very sympathetic article by Prof. H. R. Mackintosh in the *Contemporary Review*.[1] He shows by a collation of passages that the two terms appear to be directly equated with one another and that, in a few cases, "the All" is introduced as a variant for the Absolute, and he urges that this sheer identification is inconsistent with the ethical Theism with which my argument concludes. The apparent equation leads another acute but less sympathetic reviewer[2] to attack my position as undiluted "Absolutism" and to

[1] December, 1917, "A Philosopher's Theology".
[2] Prof. Widgery in *The Indian Philosophical Review*, No. I.

refer with some heat to the intolerableness "of a God who is revealed in Cæsar Borgia as well as in Saint Francis". Yet, after all, it is perhaps more correct to say, as Dr. Rashdall says, that I use the terms indifferently than that I expressly identify them. When I speak, for example, "of a principle of explanation which we name the Absolute or God," or of "the conception of a *rerum natura* whether we call it Nature, the Absolute, or God," the "or" may fairly be taken as chronicling a variation in philosophical usage which is unessential for the point under discussion rather than as indicating a personal view of the precise equivalence of the terms. As a matter of fact, the two terms in question are plainly not precise equivalents in the sense that the one may be substituted for the other in any context, and an examination of the variations in my own usage would indicate, I think, a growing differentiation between the two as the argument proceeds. This is partly due to the progressive nature of my argument which Prof. Mackintosh rightly signalises, and on which I may be permitted for a moment to dwell. The whole of the first series of lectures is devoted to the establishment, as against Naturalism, of the general position of Idealism. The argument did not go beyond the world of finite experience: it was content to recognise in the process of that world an indwelling reason and purpose. "God as immanent," I said, in opening the second series, might be described as the text of the first year's lectures; but so far the further issue between an impersonal Absolutism and a Theism which should be at once ethical and religious remained undetermined. All the more distinctively speculative questions as to the meaning of creation, the degree of independence compatible with a derived existence, the possibility and nature of a divine experience—these and other cognate questions all remained to be dealt with in the second series. Inadequate as must be the treatment of problems whose perfect resolution must be pronounced impossible for human thought, the questions were at least faced and considered, and it seems to me on reflexion that the sifting of the difficulties helped to clarify my own thought, making distinctions clearer and more explicit, and thus insensibly superseding phrases which bore an intelligible meaning in the earlier context in which they occurred. Something of this kind happened, I think, with the terms "God" and "the Absolute" when the fact of the divine transcendence became as obvious as the doctrine of immanence dwelt on in the earlier series. But in spite of this differentiation the two terms will be found occasionally used as interchangeable even

to the end, and perhaps I may be able to show that the usage is defensible and need cause no real confusion of thought.

But why, it may be asked, retain at all a term like the Absolute, apparently so ambiguous in its import and so questionable in its antecedents? Dr. Rashdall would prefer to dispense with it altogether and to speak simply of "the Universe," which he would then describe as consisting of "God and the finite centres". There is an apparent simplification here which is attractive; but it is a simplification reached, it seems to me, by sacrificing altogether the conception of immanence, and reverting to a purely deistic view of the relation of God to the spirits whom He is said to create. "Universe" is too cold and threadbare a term to serve as the ultimate designation of the living Fact we mean to name. Etymologically, no doubt, it was intended to imply the unity and system of the whole as opposed to what Carlyle called a multiverse or chaos. But the implication hardly survives in ordinary usage. Moreover, the term is perhaps most commonly used not as an all-inclusive term but of the world as distinguished from God, and its primary suggestion is that of the immeasurable fields of space dotted with innumerable suns and planets. In any case, its associations are with the "bad" infinite, the endless progress: it lacks almost entirely the suggestion of a self-contained and internally organised whole, beyond which there is nothing. The latter is the true philosophical meaning of the Absolute, and it is well to have a term to express just this meaning. For an idealist or spiritual view, reality is a systematic whole of this description. Such a theory as I have tried to expound finds it impossible to take God and the world as two separate and independently existing facts. A deistically conceived God, existing in solitary state before the world was, and to whom the finite world bears only a contingent relation, as called into existence by the word of His power, is, I have insisted, a figment of the logical imagination. God exists only as a self-communicating Life: in theological language, creation is an eternal act or process—a process which must be ultimately understood not as the making of something out of nothing but as a self-revelation of the divine in and to finite spirits. Such, I said, is "the eternal fashion of the cosmic life. The infinite in and through the finite, the finite in and through the infinite—this mutual implication is the ultimate fact of the universe as we know it" (p. 315). This, then, is the true Absolute, a term which would be inapplicable to the transcendent God of an abstract monotheism, but which is not unfitly applied to the sweep of a Life which realises itself in

and through the process of the finite world, as consummated in the divine sonship of man. It is always, I think, of God as thus organic to the world that the term 'the Absolute' is used in my volume, and Prof. Ward's hyphened phrase 'God-and-the-world'[1] would therefore exactly express the meaning I had intended to convey.

It is plain that the process involves a real otherness in the finite selves. If it were not so where would be the room for "joy in heaven" over the repentant sinner? The whole of religious experience involves such an otherness. "Religion," as Mr. Bradley himself reminds us, "is throughout a two-sided affair."[2] I have protested, accordingly, in the strongest possible terms (as Dr. Rashdall acknowledges) against the cheap and easy monism which treats the individual selves as merely the channels through which a single universal consciousness thinks and acts—masks, as it were, of the one actor who takes all the parts in the cosmic drama. This world of ours is not such a game of make-believe—a game which would be cynical if it were not childish. And I have protested equally (though Dr. Rashdall seems to be not quite so sure of this) against the opposite idea, which denies any divine self-consciousness except that which is realised in the finite individuals. My argument presupposes at every turn a comprehensive divine experience which is other than, and infinitely more than, that of any finite self or of all finite selves collectively, if their several contributions could be somehow pieced together.[3] If the first view abolishes the reality of the finite selves, the second recognises them alone as real, reducing God to the status of an abstract universal. In opposition to these two extremes I maintain, as I have

[1] *Realm of Ends*, p. 241. The hyphens are also used in the table of Contents, p. xii. "A God that was not a creator, a God whose creatures had no independence would not himself be really a God. Herein theism differs from thoroughgoing singularism or absolutism. A theism that is reached through pluralism can never end in an Absolute in which God and the World alike were abolished and lost" (p. 241).

[2] *Essays on Truth and Reality*, p. 433 ("On God and the Absolute").

[3] Dr. Rashdall refers to my statement that "the presence of the Ideal is the reality of God within us," and asks, "Does this mean that God is *merely* the Ideal in us?" It is enough to point out that the express contention of the chapter in which the statement occurs ("The Ideal and the Actual") is the validity of our moral and religious ideals as the revelation of an objective reality. "The ideal," I say, "is precisely the most real thing in the world," and, again, the presence of the Ideal in a human consciousness is "the actual presence within it, or to it, of the Perfection to which it aspires". What more could I say to emphasise transfinite reality? The presence of which I speak is no other than that of the Spirit whose function it is to guide us into all truth.

always maintained, the real individuality and ethical independence of the finite selves as the fundamental condition of the moral life, and I accept at the same time the reality of a divine or perfect consciousness, because the process of human experience and the possibility of progress in goodness and truth remain to me inexplicable, unless the finite creature is grounded in and illuminated by such a creative Spirit. I accept the relative otherness and independence involved as an ultimate mystery, covered but not explained by the word creation. I call it a mystery because, as I said in my book, to construct for ourselves the relation in question would be to transcend the very conditions of our individuality, to get, as it were, behind the conditions of finite existence and actually repeat the process of creation. Hence when we do try to schematise the fact for ourselves, we either eliminate the characteristics of selfhood by making the individual simply a vehicle of transmission, or, on the other hand, we lose hold of the creative unity altogether by treating the individuals as independent, self-subsistent units. But our failure to comprehend the compatibility of our ethical freedom with our ontological dependence is no valid reason, I suggested, for denying the freedom and responsibility which is our most intimate certainty. And the combination which seems a speculative impossibility presents no difficulties to the practical religious consciousness; it runs like a familiar paradox through the most characteristic utterances of devotion.

A real otherness, then, is fundamental to my argument. This otherness is, of course, most conspicuous when regarded from the side of will, but it must be admitted to hold good through the whole range of self-conscious experience. No mental experience of mine can, in the sense in which it is my experience, form part of the experience of any other mind. This is the "formal distinctness" of selves which Prof. Bosanquet so disparages, and which I have defended against him in a series of passages some of which Dr. Rashdall quotes. I reject the whole conception of the "confluence" and "overlapping" of selves as existents. A self may be largely identical in content with other selves, but to speak as if their common content affected in any way their existential distinctness is, I contend, to be the victim of a confusion. In a subsequent controversy Prof. Bosanquet sought to support the idea of confluence by "a simple analogy from knowledge": just as his philosophy, he said, might be improved (in the opinion of his critics) by incorporating elements of truth from other quarters, and might thus even become in the end a system of absolute truth, so

it is reasonable to think that "the perfection of the finite individual would imply a change in his identity and possibly an absorption into another's". But it is precisely the analogy from knowledge—the confusion between truth and existence—which is the πρῶτον ψεῦδος. There is no analogy between the piecing out of an impersonal system of thought and the development of a personality. Uniqueness belongs to the very notion of a self or consciousness. No one else can, literally or directly, see the world through my eyes. However sympathetically he may, as we say, "think himself into" my experience and point of view, his experience remains an effort of the constructive imagination, which may, with a large amount of success, reproduce my experience but can never be existentially identical with it. That being so, it follows—follows, I might say, *ex vi termini*—that it is meaningless, as Dr. Rashdall contends, to speak of one consciousness as "included in another," or to speak of "a Mind which includes all mind," and of man as, in that sense, "a part of God". What holds good as between finite consciousnesses would also be true of a divine experience, so far as that is conceived as a self-consciousness essentially similar in structure to our own. Dr. Rashdall in his whole way of speaking presses this essential similarity much more confidently than I feel inclined to do; but, setting that aside for the moment, I do not suppose that anyone would maintain that my sensations, perceptions, thoughts, and desires—my experience as I immediately experience it—is present, as such or in its immediacy, in the divine experience. Even those who, like Mr. Bradley, speak exclusively of the Absolute, do not suggest that the experiences of the finite centres form part, as such, of the absolute experience, but only as, in some fashion, supplemented, transmuted, harmonised.[1] They could only form part, as such, of a divine or absolute consciousness, if that consciousness is identified and equated with the collectivity of the finite centres in which it is said to realise itself; and in that case there would be no divine or absolute experience at all in the sense of the present discussion.

So far, then, as we think of God simply as self-consciousness, this element of otherness must remain: the experiences of finite selves do not form part of the divine experience in the same sense in which they are the experiences of the selves in question. This may be said to follow from the definition of the term, and the implication is, if possible, still more

[1] *Cf. Essays on Truth and Reality*, p. 413, "otherwise than in their several immediacies".

emphasised when we use the expression "centres of consciousness". I cannot but think, however, that in Dr. Rashdall's treatment there is something like a substantiation of the mere form of consciousness. As applied to God, this results in leaving out of account "the common content of the world," "the nature of the whole," which, as harmoniously present in a divine experience, may fitly be called the nature of God. God is treated merely as a "consciousness" or "centre of consciousness," and from that formal point of view, there is naturally no difference of status discernible between one centre of consciousness and another. But surely God means for us, not simply or primarily the existence of another self-conscious Being, but rather the infinite values of which His life is the eternal fruition and which are freely offered to all spirits for their appropriation and enjoyment. Truth, Beauty, Goodness, Love—these constitute the being of God—"the fulness of the Godhead," brokenly manifested in this world of time. God *is* Love.[1] "God Himself," said St. Bernard, "is manifested in His wisdom and His goodness, for God consists of these His attributes." Both God and man in fact become bare points of mere existence—impossible abstractions—if we try to separate them from one another and from the structural elements of their common life. Hence, as Dr. Rashdall has noticed, I am "somewhat chary" of using the word "Consciousness" at all in the course of my argument, and in speaking of God in his relation to the world the expressions I use by preference are rather such as "the containing Life" (p. 255), "the sustaining and containing Life of all the worlds" (p. 389), "the infinite experience" (293), "the ultimate Experience on which we depend" (364). I speak of "the creative and informing Spirit" (363), "the universal life" in which the finite individuals share (390), "the nature of the whole" on which they draw (383), "the fontal life of God" (294), and I describe that life—metaphorically, no doubt—in opposition to Prof. Bosanquet's analogy of a continuum, as "the focal unity of a world of self-conscious worlds to which it is not only their sustaining substance but the illumination of their lives" (297). Some of these expressions are doubtless open to criticism, and I do not put forward any of them as faultless, but what the phrases aim at is to keep in view at once the transcendent being of God for himself, which we inadequately figure to

[1] Similarly in the latter Neo-Platonic philosophy the supreme principle is called the Good not in the sense that good is a predicate of it: Good *is* it. *Cf.* Prof. Taylor's paper on "Proclus," in the *Proceedings of the Aristotelian Society*, vol. xviii., p. 613.

ourselves as a self-consciousness or personality on the model of our own, and the creative and illuminative activity of the same Spirit in the lives which live, and are sustained in life, only through its self-communicating presence.

I cannot, therefore, accept Dr. Rashdall's too complacent statement that "all the conclusions which are applicable to each particular self in his relation to another seem to be equally applicable to the relation between God and any other spirit".[1] I have drawn, indeed, the very opposite conclusion in my criticism of Prof. Howison's position: "The relation between the finite spirit and its inspiring source must be, in the end, incapable of statement in terms of the relation of one finite individual to another. To treat God as no more than *primus inter pares* is to lose touch both with speculation and religion." Dr. Rashdall will say that his position is different from Prof. Howison's, inasmuch as he makes God the creator of the finite selves, while Prof. Howison does not. This seems an all-important distinction, yet I cannot find that it makes any real difference to Dr. Rashdall's view of the relation between the finite spirits and their creative source. This is perhaps due to the way in which Dr. Rashdall appears to conceive creation. He insists that it must be conceived in terms of "efficient causality," which he further interprets as an act of will. The origination of a finite spirit is thus represented as the result of a divine fiat, and once called into being it seems to be there on its own account, cut loose, as it were, from the Author of its being and capable therefore of entering only into external relations with Him. But in that case the assertion of God as creator becomes little more than an empty acknowledgment, and, as I have argued in my chapter on the subject, the whole idea of efficient causation, as applied to the relation between God and the world, seems to carry us back to a realm of magic, and particularly so when it is applied to the creation of conscious or spiritual beings. "Spirits," I said, "cannot be regarded as things made, detached like products from their maker: they are more aptly described, in the Biblical phrase, as 'partakers of the divine nature' and admitted to the fellowship of a common life." A soul is not created once for all *ab extra* by a magical act. Surely we have to do here with a continuous process, in which the soul is given the opportunity to make itself. And, to begin with, the soul is not distinguishable from the bodily vehicle through which it is eventually realised. It is no paradox to say that the soul makes itself,

[1] *Personal Idealism*, p. 386.

but the process is only possible through the continual presence of the self-manifesting Life in which it is rooted. If we liken the process and its result to the addition of a child to a family, we must recognise that the relation involved is really more intimate still. "The Productive Reason remains at once the sustaining element of the dependent life and the living content, continually offering itself to the soul which it has awakened to the knowledge and quest of itself." I quote my own words because I do not know that I can find any others which would better suggest my view of the organic relation of the human and the divine.

What I miss in Dr. Rashdall's account is an intimate sense of the truth, with which as a theological doctrine he is of course familiar, that if God is creative His relation to the world must be conceived not as that of a *causa remota*, but as that of an ever-present sustaining ground. It is this ontological dependence which forbids our thinking of the relation between "God and the spirits," as entirely on all fours with that between individual finite selves; and to forgetfulness of this must be traced, I think, the singular form in which Dr. Rashdall sometimes expresses his position. "The ultimate Being," he says, "is a single Power, if we like we may even say a single Being, who is manifested in a plurality of consciousnesses, one consciousness which is omniscient and eternal, and many consciousnesses which are of limited knowledge, which have a beginning, and some of which, it is possible or probable, have an end." Hence, "we may regard all the separate 'centres of consciousness' as 'manifestations' of a single Being," or we may even say that "at bottom there is but one Substance in the universe . . . which reveals itself in many different consciousnesses".[1] We see Dr. Rashdall in such phrases driven to seek a ground for his God, as much as for the finite centres, in an ultimate principle behind both, and finding, naturally, no other mode of describing this principle than the blank designation of Being or Substance. But this necessity of falling back on inadequate and historically exploded categories arises, it seems to me, because both the omniscient and the limited consciousnesses have been emptied of the common content which alone gives both their meaning. When we take them as they really live and have their being, their life in one another is seen to be the single self-supporting and self-explaining Fact, in a word, the Absolute; and here "indwelling," and "participation" seem to me the natural metaphors to use. But the metaphors refer

[1] *Theory of Good and Evil*, vol. ii., p. 241; *Philosophy and Religion*, p. 105.

to communication and appropriation of content, not to any impossible fusion or interpenetration of personalities, which would obliterate both the Giver and the receiver.

It is impossible for me in the space at my disposal to refer to all Dr. Rashdall's criticisms, but something must be said of the difference between us on the question of efficient causality. I have already referred to the stress he lays on efficient causation as the proper expression of the relation of God to the world. Causality is identified by Dr. Rashdall with the activity of will, and, thinking of God as Will, we must think of Him, he says, as "willing all the events of the world" and as "causing the laws of nature" (p. 274). "What does He will, if He does not will the laws of nature and all that happens in consequence of them?" (p. 281). This conception of God as a Will immediately causing events in the natural world is familiar to us in Berkeley and the Occasionalists, and both Locke and Berkeley constantly refer to the laws of nature as due to "the arbitrary will and good pleasure of the wise Architect". Berkeley's theism is, indeed, essentially an attempt to spiritualise Nature by putting a divine volition behind every natural event, and a sustained act of will behind the systematic interconnexion of events which we call the laws of nature. But, attractively as Berkeley presents his thesis, the result is rather to reduce the divine activity to the level of a natural force—a spout behind the clouds, as Hegel wickedly says, playing upon the human sensibility. The divine will has no other content than just the facts of nature and their interrelations, and these facts are not in any way transformed by the theological baptism they have undergone. Dr. Rashdall's theory appears to move on the same lines and to be open to the same criticism. Efficient causality seems to me a category only applicable *within* the physical world. It is in strictness applicable only to the action of one material body upon another. Human actions fall within its scope only so far as human beings are spirits embodied, and, through their bodies, capable of mechanical action upon other bodies. It seems to me impossible to employ such a conception to describe the relation of God to the world; and a spiritual term like will would be, I think, better reserved for the spiritual sphere. Although we must certainly think of the stable conditions of the natural world as founded in that Will which is one with the divine Nature, it is only in a general sense, as an order on which the realisation of certain values depends—as a means, in short, to the supreme divine end—that we can profitably exhibit it in that relation. To speak

quite strictly, God's action may perhaps be said to be identical with his essence: He wills Goodness, Beauty, Truth, the Perfect Whole. In that case to talk of "God's volitions" in the plural, as directed to separate and individual ends, is in some sense an accommodation to our discursive intellect and to the dispersedness of our finite lives. Such a conception of the Perfect Will as I have indicated does not, however, exclude, but rather makes intelligible, the divine causality in relation to other spirits; for the action of spirit upon spirit has nothing in common with that of a force. It is an inward illumination, a drawing, the persuasion of reason and love. It is by the vision of Himself that God conquers the erring and rebellious will.

II.—MENTAL PROCESS.

By Hugh A. Reyburn.

Philosophical views differ notoriously in their conceptions of the nature of mental processes, and these philosophic differences are reflected in psychology. Psychology cannot make any headway without using one or other of the conceptions or hypotheses concerning which metaphysicians disagree. The interpretation of the observed facts, the choice of emphatic points, and indeed the whole trend of psychological treatment depend on an underlying conception of mind. Sometimes the claim is made that psychology should be studied without presuppositions, and the claim is not without significance and justice. The conceptions or hypotheses used should be those which flow most naturally from the facts, they should be framed on the basis of extensive experience, and they must be judged by their power to make the subject-matter of the science coherent and intelligible. Nevertheless it is not possible to ascertain the facts of mind without using, at least tentatively, some hypothesis or assumption; and at later stages of the science assumptions are even more necessary—unless, of course, psychology develops into a criticism of first principles and becomes metaphysics. Holding this view, I do not dispute the right of a thinker to let metaphysical considerations enter into his psychological theories or dispute his claim to revise a psychological doctrine, however well established, on the ground that it is inconsistent with any coherent and intelligible view of mind. But at the same time, when a dispute on these lines arises between metaphysics and psychology, the latter has in turn the right to demand that any doctrine based on metaphysical considerations should be as fruitful, as closely in touch with the facts, as clearly explanatory, and as unforced, as the impugned doctrine of the psychologist. A hypothesis which claims to be true must be able to do all that a 'working-hypothesis' does, and more. If through lack of development it is unable to do this, it must await greater maturity before displacing its rival; if it is prevented by its inward nature from carrying

out the rational functions of the working hypothesis, it must reconsider its pretentions in metaphysics as well as in psychology.

From this point of view I wish to consider the conception of mental processes which Prof. Alexander has been recommending for the last ten years.[1] His theory of mind rests ultimately on metaphysical or epistemological considerations, but he has developed steadily and skilfully a method of psychological interpretation which, unlike many other psychological hypotheses, he regards as metaphysically sound. There may seem to be a conflict between this statement that Prof. Alexander's view is based on metaphysical considerations and his own account of his method as a plain unbiased description of facts.[2] But his desire is manifest throughout to avoid the evil of subjective Idealism; to this end he denies all representative theories of knowledge; and he interprets everything in the light of a fundamental distinction between subject and object, or mental and non-mental —a distinction which he himself admits to be metaphysical.[3] I do not doubt that Prof. Alexander's method can with some justice be called one of description, but his descriptions emerge after a process of thinking, and the thinking has a metaphysical *Aufgabe*.

Space does not permit me to give anything like an adequate statement of Prof. Alexander's view as I understand it; in the main, acquaintance with his exposition must be taken for granted, and I shall indicate only those points in his view on which the subsequent discussion hinges. Throughout my

[1] Prof. Alexander's views will no doubt appear shortly in a convenient form when his Gifford lectures are published. In the meantime I may mention the following writings. In the sequel these are referred to by the numbers prefixed to them here :—

1. 'The Nature of Mental Activity,' in *Proc. of Arist. Society*, 1907-1908.
2. 'Mental Activity in Willing and in Ideas,' *Proc. of Arist. Society*, 1908-1909.
3. 'On Sensations and Images,' *Proc. of Arist. Society*, 1909-1910.
4. 'Self as Subject and Person,' *Proc. of Arist. Society*, 1910-1911.
5. 'Foundations and Sketch Plan of a Conational Psychology,' in *British Journal of Psychology*, December, 1911.
6. 'Imagery and Memory' (Discussion), in *Proc. Arist. Society*, 1911-1912.
7. 'The Method of Metaphysics and the Categories,' in MIND, 1912.
8. 'On Relations; and in Particular the Cognitive Relation,' in MIND, 1912.
9. 'Collective Willing and Truth,' in MIND, 1913.
10. 'Freedom,' in *Proc. Arist. Society*, 1913-1914.
11. 'The Basis of Realism,' 1914, from *Proc. of Brit. Academy*.

[2] 5, p. 240; 3, pp. 1-3; 2, pp. 1 and 23 f., etc.

[3] 3, p. 35; *cf.* 2, pp. 23 f.

argument I shall have to express my disagreement with Prof. Alexander; but I do not wish to be misinterpreted. Prof. Alexander's theory is compactly wrought and very firmly maintained; and hostile as my contentions may be, I wish to express my sense of the clearness of his thought, and the great value it has for current philosophy. In order not to complicate the argument of this article unduly it is necessary to pass over some points which, it seems to me, would strengthen my case—the theory of the knowledge of other minds is an outstanding instance; and I am regretfully forced to omit all reference to many points in which Prof. Alexander seems to me clearly in the right.

The following are the salient points in Prof. Alexander's theory so far as we are concerned with it here:—

1. What is called experience is a compound of two factors, existentially distinct; *viz.*, a mental or subjective factor and a non-mental or objective factor. The mental factor is called consciousness, and the non-mental factor is called the object.

2. Both factors are experienced in every experience, but in different ways. The mental factor is 'enjoyed'; the non-mental is 'contemplated'.

3. The qualities of the non-mental factor—the object contemplated—are not in any sense qualities of the subjective one—*i.e.*, of the mind. This relation of exclusion is not reciprocal: contemplated objects may have mental qualities, but these qualities are not contemplated.

4. The mental factor is a fact in time; mental processes happen.

5. These mental events are all conations or acts of attention, and have only one quality—consciousness. Consciousness itself is described as colourless.[1]

6. Consciousness exists in space, being a function of the higher nerve centres.

7. Its functions vary in feeling-tone, intensity, complexity, spatial direction (*i.e.*, along nerve paths), and volume.

8. At least in perception these functions or activities are the effects of, are evoked by, the object acting causally on the brain. They are unique and non-physical reactions of the brain, provoked by its environment.

9. To each variation in the object there is a corresponding though distinct variation in the conative activity of the brain. Each apprehended object involves an appropriate and peculiar pattern of conative process.

[1] Prof. Alexander's treatment of feeling is undecided. He appears to waver between two views: (*a*) that feeling is an independent quality of the mind, (*b*) that it is an attribute or mode of conation, and to prefer the second alternative.

10. The distinction of enjoyment and contemplation applies to all levels of experiencing, *e.g.*, to memory. A remembered object is 'brought back' with the mark of the past on it: a remembered mental state is 'renewed' and not brought back.

11. Psychology is the study of mental states or processes. It may be defined as the science of ordered mental propositions which can be enjoyed but not contemplated.

The discussion of these points may be brought under three heads. Among the special features of Prof. Alexander's view the most fundamental one is the distinction of subject and object; on that depends the distinction of enjoyment and contemplation. Less closely connected with these there is what is perhaps the greatest novelty of all, the conception of a spatial non-material mind. This last conception will be taken first, then the distinction of enjoyment and contemplation, and finally the distinction of subject and object. Logically considered each of these three conceptions is a hypothesis. Each is an interpretation and generalisation of certain facts, and must be judged in the end by its explanatory power. It is in this sense that they are to be considered throughout.

I. *Mind as a fact in space.*—Mind, or consciousness, according to Prof. Alexander, has volume and occupies space. The space in question, of course, is not that of the objects of consciousness. Mind is not extended because the image or percept or sensation which it apprehends is extended. It is not spread over the object but over the brain 'as greenness is spread over a leaf'.[1] 'Mind and body are not two things but one. They are in the same place, and every mental process issues in some bodily reaction because it is in one of its aspects itself a bodily process.'[2] Statements of this nature may be interpreted in two ways; one of these is commonplace, the other startling. Prof. Alexander intends the second interpretation to be taken. On the first interpretation the meaning is merely that the mind is believed to depend on the brain, and in that sense is located there—a true but trivial proposition according to Prof. Alexander; on the second, consciousness is itself spread out and is enjoyed as extended.[3]

Naturally one asks: what is the evidence for this view? Prof. Alexander's reply is that 'the appeal is to experience itself. Consciousness has . . . a clearly enjoyed voluminousness, particularly when the mind is engaged with many objects at once. It has a spread out character, exactly the

[1] 2, p. 7. [2] 7, p. 9. [3] 4, p. 12.

same as that with which we are familiar in external objects. And that enjoyed voluminousness is located vaguely within the contemplated body.'[1]

In dealing with this position it is important to see clearly wherein it differs from Materialism. Consciousness is a spatial function of the nerve centres, but it is not itself physical: the physical world can only be contemplated by us and not enjoyed. *Qua* physical the body is not enjoyed but only contemplated; what is enjoyed is a 'new and remarkable property' of the body, 'an activity [which] does not cease to be mental because it is the activity of what in certain aspects is purely physical'.[2] There are thus two points to be distinguished. On the one hand mind is a unique and non-physical 'quality'. Considered as we know it by direct acquaintance, *i.e.*, by enjoyment, it is 'a specific thing, a complex of conscious processes'.[3] On the other hand, 'the processes which are conscious are specific processes taking place in a material thing,' and are 'entirely expressible in physiological terms'. Of these two aspects of mind we are aware first of the unique mental or conscious quality of mind. The knowledge of its identity with physical processes comes afterwards, and is an inference based both on the primary enjoyment and on subsequent contemplation of the body. Now, what Prof. Alexander has to show is that by means of enjoyment as distinct from contemplation mind apprehends itself as having a spatial character. Accordingly every form of sensation must be set aside, for sensation is always an object; and this applies to organic and kinæsthetic sensations as well as to those of special sense. Prof. Alexander's contention is that in experience there is a spatial element not given through sensation. 'A change in the tenour of our thoughts,' he says, 'is felt literally as a change in local direction. And this differentiation of consciousness is distinguishable from the accompanying sensations in the scalp or from sensations of movement in the eyes, which with me nearly always accompany a change in the thoughts.'[4] 'Even in localised sensations of touch, where the bodily object, the hand, intrudes into the felt pressure, it is possible to get a faintly accentuated experience of direction of the movement of consciousness as distinct from the sensum.'

It is difficult to accept this analysis. One freely admits vague undiscriminated spatial characters in normal experience, and these at times may be called experiences of direction.

[1] 4, p. 12. [2] 4, p. 15.
[3] 11, p. 12 [4] 4, p. 13.

For example, if I touch an object with my finger without looking at it and give attention to the touch experience, there is often, as Prof. Alexander says, a faintly accentuated experience of direction of movement. But it seems resolvable into sensory experience. For one thing there is an adjustment of the relevant portions of the body to receive sensation from a special direction, not altogether unlike the adjustment made to receive sound. The various portions of this adjustment are spatially characterised, and in being referred to the single space continuum constitute an experience of direction. Moreover, when the adjustment is being made, the change from the previous direction of attention provides an experience of movement consisting of the numerous small movements made in producing the new adjustment and abandoning the old one ; movements of the muscles of the neck, the back, forehead, arms, eyes, and so forth. All this, however, is sensory ; in Prof. Alexander's terminology it is a matter of contemplated objects. Other theories may fuse (or confuse) contemplation and enjoyment, but Prof. Alexander holds them sharply apart. But if every sensory element is excluded by analysis, I confess that I find no spatial character left. Even when there is spatial experience vaguely referred within the head, as is common in mental fatigue, the localisation is on the ordinary 'contemplative' lines ; the spatial aspect being due to organic sensation qualified by visual and tactual meanings. No one will deny the difficulty of detecting all the spatial elements of an experience and of referring them to their proper sources : it is always possible that when all sensation is excluded something more evasive may be left. But there seems no warrant for believing that this abstract possibility is an actual fact. It is difficult enough to discriminate reflectively all the organic and kinæsthetic sensations present ; and the normal case of introspective[1] spatial discrimination is one in which we attend to certain more obvious features and leave unanalysed a vague background consisting chiefly of organic and kinæsthetic material. This elusive sensory background seems adequate to account for the experience of localised movement to which Prof. Alexander refers, without the hypothesis of a separate and non-sensory experience of space. I have an uneasy suspicion that if the physiology of the nervous system were not known, the enjoyed voluminousness and change of direction of which Prof. Alexander speaks would be enjoyed not only in the head but also largely in the trunk and limbs.

I submit, then, that Prof. Alexander's hypothesis is not

[1] In the ordinary sense of the term, though not in Prof. Alexander's.

needed by the facts, and is not verifiable. The 'felt' volume and direction are explicable by reference to the background of organic and kinæsthetic elements which accompany all our acts of attention, and on Prof. Alexander's view should be considered as objective, a property of objects contemplated and not of processes enjoyed. If Prof. Alexander replies that the experienced volume and movement is clearly experienced as our own and not as belonging to objects, I suggest that this throws doubt on the rigid distinction of subject and object on which his general theory rests.

The appeal to the facts, as I believe, fails: is there any other ground for the hypothesis? Does it make anything more intelligible? I submit that it does not; and indeed that it adds to our mystery. Consciousness, as Prof. Alexander takes it, is a hybrid between physical things and the unextended mind of more usual theories. At first sight, if we adopt the suggested hypothesis, we seem to avoid the old difficulty of understanding how mind and body come together at all; but farther scrutiny suggests doubts. Does it clear matters up in any way to say that consciousness is a function of the brain? The main difficulty of both parallelism and interaction is to offer something more than a bare statement of a temporal order of otherwise disconnected series of facts, to do more than say that neurosis and psychosis are found in such and such a relation of sequence or coexistence. But it does not improve matters to allot a spatial character to the mental term. Their common spatial qualification merely allows them to live in the same house, at best it gives not coherence but only more conjunction; not explanation but hard fact, with the added doubt that it may not be fact after all. The older theories conjoin in time two sets of facts, independently ascertained: Prof. Alexander conjoins them also in space. Are we any better off?

In one respect we are in a poorer situation. Consciousness is a new quality or function of the brain, and this quality moves. But the movement is non-physical: it is a process of a new order connected with a fresh form of cerebral activity. To deny this, and to assert that consciousness *is* this fresh form of cerebral activity, is to fall back into pure physiology and to abandon the inside point of view, the point of view of consciousness itself. And yet if consciousness is not physical how can it move? What is there to move? Surely the movement is a function of the brain *qua* physical, just as the motion of waves in water is a function of particles of water. Although the wave is not an identical mass of water moving along its path, it is a complex of

movements of actual physical particles and is itself physical. If consciousness is of a similar nature, mind is physical throughout and not merely in 'one of its aspects': if consciousness is not of a similar nature, the spatial movement seems unintelligible.[1]

The guess may be hazarded that Prof. Alexander's conception of a spatial mind is closely connected with, and even motived by, another unusual view, that the object (in perception at least) is the cause of consciousness. If we are to fit consciousness into the causal series of things it must be made, so the suggestion seems to be, if not physical then quasi-physical—a spatial function of a physical thing. To examine the general conception of causality contained in Prof. Alexander's theory would take us too far afield, but a comment on its psychological bearing may be possible within the present limits. 'I assume,' he says, 'and will afterwards justify the assumption, that the table provokes in the thing called my mind the action of perceiving, stirs my conciousness into activity, and that it does so by acting causally on my brain.'[2] In another place he says: 'In every causal relation, instead of saying that the cause exhibits itself in the patient by the effect which it produces, we must say rather that the cause is revealed to the patient as whatever object it is: and the patient is not aware *of* the effect, but is only in a state of enjoyment to which the cause is revealed or by which the patient becomes aware *of* the agent'.[3] This applies primarily to perception, and the treatment of imagination and thought is far from clear.. From the argument of 4 it seems that the causal relation of object to subject should be generalised, but in 8 vital differences appear. 'When a stimulation in a particular region of the brain makes us think of a friend, the imagination (not the image) is the effect of the internal stimulation which we do not contemplate and not of the friend which we do contemplate.'[4] This seems to upset a previous statement that 'The causal relation is the one which more forcibly than any other demonstrates the relation of enjoyed and contemplated; and what is learned from it can be extended to all knowing'. This last quotation illustrates Prof. Alexander's general tendency to make perception the basis of his interpretation of knowing and to assimilate other forms to it as far as possible. But it does not seem possible to generalise

[1] *Cf.* the statement made in another connexion. 'Physical is what has physical properties. Mental is what has mental properties. One physical property is to be in space' (3, p. 16).

[2] 4, p. 7. [3] 8, p. 325. [4] 8, p. 326.

the position here. It is not plausible to say that as I think of Julius Caesar my brain is affected causally by him, except in an extraordinarily remote sense in which it is also affected by all the rest of the universe. On the other hand, if we do not generalise, knowledge is split into two kinds; one where the object is the cause of knowing, the other where something very far separate from the object is the cause of knowing. But whether or not the analysis is generalised, it is more than doubtful. When I perceive a coloured object, the cause of my brain state is not the visible colour, but rather the stimulation of the cerebral centre by the optic nerve, which again is affected by the vibrations acting on the nerve endings in the retina. Surely this is ascertained fact, and is inconsistent with the hypothesis suggested. The stimulation of the nerve is the important thing, whether at its ending or higher up its course; and the external object—not to speak of the colour—is a farther consideration. Causally, the central processes connected with mental states are of one type: stimulation of a cortical area by a nervous impulse from the periphery does not differ in kind from stimulation by an impulse from some other and more central point. In neither case is the object apprehended the immediate cause either of the brain state or of the mental act. Of course there is a causal connexion between object perceived and brain state; but, so far as I know, it is never direct. There are always intermediate links. But if we hold Prof. Alexander's doctrine that 'in every causal relation . . . the cause is revealed to the patient as whatever object it is,' the cause in question should be the immediate one and not something further back in the endless and infinitely complex causal network. If not, then our procedure is arbitrary; and we may single out as *the* cause any term which suits our fancy or our theory.

II. *Enjoyment and contemplation.*—We come now to the second of the three main conceptions or hypotheses which we have to consider. Mental processes, we are told, are enjoyed: objects are contemplated. Mental processes thus have a twofold awareness; they are aware of objects by contemplating them, and at the same time they are aware of themselves by enjoying themselves. What, then, is the difference in the process of experiencing, *i.e.*, in the awareness itself, indicated by the distinction of the terms enjoyment and contemplation?

The natural tendency is to answer this question by reference to differences in what is apprehended in the two cases. For surely, it will be said, there is a vast obvious difference between apprehending one's *self* and apprehending an *object*. But for the moment we may postpone consideration of the

differences in what is apprehended. Other theories have admitted great differences between selves and objects, and have not drawn a distinction of the kind in question between the modes of apprehending them. It is well to satisfy ourselves whether or not there is a well-marked distinction between the two forms of awareness considered by themselves.

Taken abstractly in this way, the distinction seems impossible to draw. Prof. Alexander's points of distinction all contain a reference to that which is apprehended. The numerical identity of enjoying with what is enjoyed is in contrast with the numerical distinction of object and contemplative act: but this obviously goes beyond our present abstract inquiry. So also do such contentions as that in memory of the self the past mental state is renewed, whereas in memory of an object the object is brought back. Apart from this reference to what is apprehended no distinction between enjoyment and contemplation is made clear by Prof. Alexander. This does not prove that there is no such distinction; but it generates a suspicion that the distinction between the modes of apprehending is merely the reflexion of a distinction between different apprehended materials.

We may now consider the distinction in a more concrete form, including a reference to the material apprehended. Mental processes apprehend themselves and objects simultaneously. But their apprehension of themselves is in no wise distinct from their existence. 'I can know my mind,' Prof. Alexander says, 'for I am my mind, which is an experienced experiencing, not an experienced object. To know my mind means as all knowledge means, the existence of my mind, and nothing more.'[1] The distinction between knowing an object and knowing oneself is like that between striking a ball and striking a stroke. The argument thus stated is fundamental, and other modes of distinguishing contemplation and enjoyment run back into it.

The position is not easy to understand. One element in it is that the mind is awareness. Awareness is not to be regarded as a property belonging to a subject farther in the background; it is itself the essence and substance of the subject. Generally we call it a subject when we take it not in its isolation but in continuity with other acts of awareness; but we may ignore this complication at present. An act of mind is an awareness; and what we mean when we say that the mind exists is that awareness exists. So far one may go with Prof. Alexander. But he goes farther. This awareness is necessarily an awareness both of itself and of an object.

[1] 4, p. 19.

We may grant that awareness must be awareness of something, and for the sake of simplicity, we may say, without prejudice, that an 'object' is essential to awareness; but how do we reach the position that it must be aware of itself? There seem to be two possibilities. There may be no distinction whatever between 'being aware' and 'being aware of self'; or there may be a difference. We may take the alternatives in turn.

The first one is encouraged by the analogy we used above; to be aware of oneself is like striking a stroke.[1] Striking a stroke is a longer way of saying striking. Awareness of self, then, merely means awareness, and the words 'of self' are a waste of breath, or at best an elegance of expression. But if this is so, why does Prof. Alexander persist in using the phrase 'experienced experiencing,' doubling the terms and distinguishing their endings? Moreover, if we chose this alternative, it is difficult to reject the conclusion that the only thing of which we are aware is an object. To add that we are aware also of ourselves though not in the same way is to add nothing but words; for *ex hypothesi* to be aware of ourselves means only to be aware. This line of thought, if adopted, would effectually cut the ground from under psychological criticism, by removing the possibility of psychology. But in return it would also remove itself. We might be aware of objects, but we could never be aware of that fact—for awareness of ourselves would be meaningless.

Accordingly we must admit some distinction and difference between being aware and being aware of self. This, of course, does not involve (directly, at least) that there is an existential difference between self as apprehending and self as apprehended: there is no obvious *a priori* reason for denying that the self may apprehend itself as it stands, or for asserting that what is apprehended is always a past phase of the self. Prof. Alexander seems at times to be apprehensive lest the self should act on itself, thus involving, as it were, that the self is in two places at once and is both cause and effect of itself. 'I cannot have knowledge *of* my mind,' he says, 'in the sense of making it an object of contemplation, for that would mean that the mind could act on itself.'[2] But it is not necessary to adopt Prof. Alexander's special view of the causal relation of the object to the subject,[3] and the question remains open for further argument. But

[1] *Cf.* what is said about non-conscious life as enjoyment in 7, p. 4; and the explicit statement in 8 that 'enjoyment is not a relation at all, but a state of the self' (8, p. 315).

[2] 4, p. 19. [3] *V.* above, p. 26.

whether or not the self can act on itself we must draw a distinction between its knowing or enjoying and what is known or enjoyed in and through that act; and we must be prepared to face the consequences. Prof. Alexander seems at times to realise this. The problem of memory presents special difficulties to him, and one of his statements runs thus: 'It is clear enough that to remember a past event is also to remember my own mental state as it was in the past, the difference being one of interest. In general I am occupied with the object. But I may be interested in myself, and then the remembered conation itself stands out in prominence as contrasted with the object.'[1] There are difficulties here, and the statement seems subversive of Prof. Alexander's main position. Is interest not the obverse side of attention, and is attention not conation? How can the mind be interested in itself without directing conation upon itself, *i.e.*, contemplating itself as an object? It is at least significant that one can be interested in a mental state, and it suggests that there is a palpable difference between enjoying and what is enjoyed. It does not seem open to reply that what we are interested in is merely our being interested.[2]

There is a difference between our awareness and the self of which we are aware; consequently there is also a difference, in meaning at least, between being aware of an object and being aware of ourselves as well as of an object. The question may therefore be asked, Is it true in fact that these distinct things always coincide? In being conscious, are we always also self-conscious?

In attempting to answer this question it is desirable to notice a possible ambiguity. We may take experience from within, *i.e.*, from the point of view of the mind which is having the experience; or we may take it from without, *i.e.*, from the point of another mental act which is aware of the first experience, and this second act may belong to the same or to another mind. Theory may bring the two points of view together again, but *prima facie* they are distinct. Taking first the internal point of view, the facts seem to require a negative answer to the question. A man may be so absorbed in an object that he ignores himself entirely. He may feel and think intensely, it is true, and conation may

[1] 5, p. 260.

[2] *Cf.* the following statement: 'In certain desires the remembered desire does tend to turn into an actual one, but, so far as it does, it ceases to be a memory. The case of desire is particularly difficult to handle, because to remember a desire is, if I am right, to desire a desire' (6, p. 210).

be prominent and strong. But he need not be aware at the moment that these feelings are *his* and that *he* is active. Indeed, I doubt if he need be aware of the activity *as such* at all. That he is keenly conscious is granted, but is he aware of anything so definite (and complex, I would add) as activity? If I am told that although he does not think of the activity, nevertheless it is obscurely felt or is subconsciously apprehended; it is open to me to grant the obscurity and to insist that whether it is felt or thought or enjoyed the agent is not aware of it as activity. It is activity only from the external point of view. From the internal point of view the facts require only one answer, *viz.*, that consciousness and self-consciousness do not always coincide.

From the external point of view the matter is more difficult. For here we have to take account of the self as it is, and cannot simply follow the analysis of experience from within. If feeling is always and essentially a mental fact or mode, then in being aware of feeling I am aware of my mind. Just as I may experience an external object without knowing accurately what it is, so I may experience myself without being aware that it is myself that I apprehend. Thus, theoretically at least, it is possible to be self-conscious from the external point of view when one is not self-conscious from the internal point of view. But it still remains an open question whether or not self-consciousness in this sense always accompanies consciousness. We shall return to the point at a later stage of the argument.

In the light of the results which we have reached we may revert to Prof. Alexander's distinction of enjoyment and contemplation, in order, if possible, to discover a clear line of demarkation between them. We have already failed to discover one when we abstracted from the nature of what is apprehended, and we are now considering the matter more concretely, allowing a reference to the apprehended object in the two cases.

The obvious statement is that in spite of the duality necessary to enjoyment, enjoying and enjoyed are existentially or numerically one, whereas contemplation and its object are numerically distinct. But there are difficulties. Certain components of what is apprehended are both enjoyed and contemplated. If I understand him rightly, Prof. Alexander tries to prevent this kind of thing from going too far. For example, although consciousness is a neural function, he will not allow anyone to contemplate it: it can only be enjoyed. Conversely, what is enjoyed is not the physical or neural process, but the new and remarkable function of

the brain. But at the same time, as we have seen, we are told that the spatial character of the mind is enjoyed. Space may be both contemplated and enjoyed; and presumably the same space may be concerned in both cases. Similarly with time. In memory of an object, we are told, the object is contemplated with the mark of the past upon it; and in memory of a mental state we renew it or enjoy it also as past. The mark of the past is both enjoyed and contemplated. The same thing is true of the future in expectation. Again, in my memory the remembered state or object is characterised for my consciousness as mine; so that whatever is meant by the term 'mine' is also both enjoyed and contemplated: unless Prof. Alexander has been using the term 'mine' in two utterly different senses.

If space, time, and mine can be both enjoyed and contemplated, the distinction between the two forms of awareness is not so clean cut as we thought at first.

We may pass to a second difficulty. In spite of the reiterated statement that they are different, enjoyment and contemplation seem to have their fundamental modes of operation in common. Prof. Alexander has discussed the case of memory more fully than that of most other mental functions, and we may take it as an example. He states his doctrine as follows: 'Remembering the object and remembering oneself are parallel and indeed numerically identical processes. But there are two differences arising from the fact that I contemplate the object but enjoy myself. First, the past object is presented to me in the only way in which it can, as an image or an ideal object, with the mark of the past. But now we have no image of our past mental state in the same form as we have an image of the past object. For we do not contemplate ourselves. We only have or enjoy the renewed mental process corresponding to the past object, though not renewed in the precise form in which it occurred, but in the form appropriate to the image of the past object. . . . Second, it may happen that the same object happens to be present also in perception, as when I say to a man, you are the man I remember meeting yesterday. . . . But this need not happen. . . . But what need not happen as regards the object always happens as regards the self. I am perceptually enjoyed, and, though I need not be perceiving the old object, I at any rate am here. But allowing for these superficial differences, the remembering of myself and the object are the same.'[1] In both cases the

[1] 5, pp. 260-261.

essence is awareness of self or object as past and as mine. Memory is not representative knowledge, but direct acquaintance with what is remembered qualified as past and as mine.

There remain for consideration only the two differences mentioned in the quotation; and in dealing with them it is important to keep the object of our inquiry clearly before us. We are looking for the distinction between enjoying and contemplating. We have been led to believe that it consists in some way in the fact that what is enjoyed is numerically one with the enjoying, whereas what is contemplated is numerically distinct from the contemplation. But we desire to know what difference this makes in enjoyment and contemplation. We shall have failed in our search if we discover *only* a distinction in things apprehended, and not an actual result or reflexion of it in the apprehending itself. For the purposes of argument we are assuming the distinction of subject and object, and are considering another, though no doubt a dependent, distinction alleged to exist between the modes of apprehending subject and object. But in the first of the two points offered by Prof. Alexander it is clear that the argument, for our present purpose, is circular. Objects in being remembered are presented as images or ideal objects. We have no images of ourselves. But consider the next sentence. 'For we do not contemplate ourselves.' That is to say the distinction between image and renewed mental process is a verbal repetition of the distinction between contemplation and enjoyment; not at all an expansion or explanation of it. The image, for Prof. Alexander, is not a present copy or representation of the past object; it is the object itself back again, the worse for wear perhaps, but itself and not another. So too the renewed mental process is not a representation but the actual past state, though bereft of some of its fulness and shorn of its glory. The distinction is really between subject and object, and only nominally between enjoying and contemplating.

The second of Prof. Alexander's points may be true—from the external point of view at least—but it seems irrelevant. It might help to distinguish memory of a mental state from the perceptual enjoyment of it; but it does not indicate any radical difference between the enjoyment which is memory and the corresponding contemplation. If we are perceptually aware of ourselves, we are *ex hypothesi* also perceptually aware of objects; and the distinction amounts only to this, that the numerically identical self is enjoyed as past and present, whereas the object perceived may differ from the

object remembered. As Prof. Alexander says, this is a superficial difference and not to the point here.

To sum up this part of the argument, we have failed to find in Prof. Alexander's view any satisfactory mark of distinction between enjoying and contemplating. It appears to be a verbal repetition of the distinction between subject and object, and not an independent line of demarkation. Prof. Alexander has split experiencing into two parts with a metaphysical chopper, because there *ought* to be a distinction in it corresponding to the difference between subject and object. I think it is not unfair to suggest that Prof. Alexander's distinctions of psychical material prove to be largely of this kind, when they are traced home. The elementary distinctions of conations are obtained indirectly and not directly; they are reflected into experience rather than found there.[1] After they have been thus indirectly introduced they remain little more than names for the unknown differences said to correspond to obvious ones in what is apprehended. This is hardly the mark of a good hypothesis.

III. *Subject and object.*—We have now to consider the distinction of subject and object which provides the basis for the chief novelties in Prof. Alexander's view. That there is a legitimate and necessary distinction between subject and object is nowhere in dispute. What is not so clear is the precise nature and extent of the distinction. On Prof. Alexander's view it is to be regarded as a distinction between different facts which interact but are entirely separate in point of existence. Subject and object consist of different material, and the qualities of the one are not in any genuine sense qualities of the other. Moreover, the distinction runs through all experience from top to bottom; it can be traced in or inserted into the lowest and most confused experience as well as the highest and most integrated.

In examining this hypothesis we shall have to answer, at least partly, a question we left open at a previous stage of the argument. We saw that from the internal point of view mind is not always self-conscious: we have now to consider whether it is always self-conscious from the external point of view. That is to say, we have to consider the relation of the two points of view. It is clear that there cannot be a complete separation between them. It is only from the internal point of view that we become aware of anything in the first instance, and the external point of view cannot be one from which we discover what is necessarily and utterly invisible from the internal point of view. For, external with

[1] For an almost explicit recognition of this, see 5, § 6A.

regard to a former experience, it is an internal point of view with respect of present experience. Farther, we are not concerned here with factors or elements which do not come into experience in their own proper person. The point in question is the actual structure of experience and not the factors outside it which may be said to produce it. Reflexion may find other names for the phases of experience than the experiencing subject itself does; between phases of experience it may discover connexions which are only partly apprehended or are not apprehended at all in the act itself. As I write I may be conscious of various contents (or objects) to which I do not attend, and which I do not connect together; and later reflexion may take them in their relationships and judge that I was tired or prepossessed or prejudiced, and so forth. But reflexion—the external point of view—is not entitled to ignore the structure that is given in experience and to substitute noumenal subjects and objects for it, or to insert factors which are not actually present.

From these considerations certain results emerge. In the first place, from within, the distinction of subject and object is derivative. Objectivity implies reference to an orderly context in a determinate world. It is not a quality to be cognised at one stroke, but a meaning resting on prior experience and involving a contrast between the course of objective things and the course of mental processes. That is not a datum, but a conception—and one of great intricacy—as the history of philosophic thought shows all too clearly. In the same way subjectivity involves reference to a developed system of mental activities, and comes to consciousness only in and through a course of experience. It also is a meaning which has to be developed by the mind and is not presented as a gift at the dawn of experience.

But how does the matter appear from the external point of view? We may take the objective aspect first. Prof. Alexander, if I do not mistake his meaning, holds that however rudimentary the distinctions and recognitions of mind are we must always divide feelings and conations from the rest of the content of experience and call this remainder objective.[1] It is not objective for the experiencing mind in any valid sense; but on Prof. Alexander's view the actual things of the real world appear in experience, and however much the content may seem to lack objectivity for the apprehending mind it really is objective. Is this not an illegitimate interpretation

[1] I am aware of Prof. Alexander's objection to the use of the word content. But it is used here of experience, which is not the same thing as mind on his premises.

of the external point of view? It does not supplement the experience it examines by bringing to light features which are admittedly present though unnoted. It insists rather that the content of the experience in question is objective although to all appearance it lacks the marks of objectivity, and it makes the statement because the same content considered in another way altogether and apart from the experience in question has those marks. That is, it judges the content to be objective in primitive experience because the same content, when apprehended under very different conditions by a much more mature mind, is placed in an objective context and called an object. Is this not a case of the psychologist's fallacy? If we are to read objectivity into primitive experience, must we not also read into it everything else that has come or can come out of it?

If we turn now to the subjective side we find that it is more complicated. Experience always involves mind. Even at its earliest stages it has order and unity; for it is shot through with instinct and controlled by habit. In a sense therefore it is conative from the beginning, and thus may rightly be said to involve mind. The conative unities are there, though for the most part they are unnoted at first and are not referred to a definite subject. They are part of the experience and are not added to it from later experience in the way in which objectivity was. But on the other hand, it does not seem true that there is always in experience an organised part which can be called subjective at the expense of the rest. The organisation of experience, represented by the phrase 'the direction of the mind upon a content (or object),' does not seem a necessary element of early experience. The experience, it is true, is always partly organised, and it is always directed in some degree; but the organisation is of the whole, and the trend is a movement and direction of the entire mass. It seems untrue to suggest that one part of primitive experience sits back and looks at the rest, or has the rest 'presented' to it. This notion applies, if at all, only to a later stage when the distinction between objective and subjective has grown up as an acquired meaning. If conation is the right word to use, then experience as a whole is at first conative, and the organised self within experience—as a mere factor of the whole—is a subsequent development. But it is only in this limited sense of a factor within the whole experience that Prof. Alexander admits mind or conation. Hence I suggest again that he is reading into all experience factors which belong, if at all, only to particular stages or levels of it.

There seem to be only two ways in which this criticism can be met. The first is to disregard the genetic account of mind wholly or in part, declining to accept experience as the guide to the analysis of itself. The second is to reduce the meaning of subject and object to such low terms that it may be brought into the compass of primitive experience. I doubt if Prof. Alexander will take either alternative. It is not likely that he will contend that the features of developed experience are actually present in the dim early stages; nor will he accept the reproach of having sought novelty by means of a strained terminology. But must he not, then, revise his hypothesis as inadequate to the material to be explained. Is it so certain that the analysis of the experience given in the perception of a tree[1] (or a table) by a consciousness which has developed a knowledge of what trees are, and has organised a system of subjective facts within experience, is the best clue to the nature of experience as a whole?

The criticism which has been urged from a consideration of experience at more primitive stages than those which Prof. Alexander has taken as his point of departure might also be urged from a consideration of many other levels, notably the higher ones in which the antithesis of subject-object, having once arisen, has been subordinated and transcended. But I have not space to develop it here. Instead, we may press another difficulty. We are told that subject and object are existentially distinct, and nothing which is a constitutive part of the one is also a part of the other. Ignoring the special difficulties already suggested concerning the penetration of both sides by space, time, and mind, we may ask, has Prof. Alexander carried out his own hypothesis? Mind, for him, consists of conation, and conation is an activity directed upon an object. But mind, existentially considered, does not contain the object. We must take Prof. Alexander literally when he divides cognition into two parts; cognising which is merely conation, and a cognitum which is an object. Are we not entitled to borrow Prof. Alexander's metaphysical hatchet and cut off the reference to the object? What exists as a mental fact is mere conation, it is merely moving awareness. The phrase 'of an object' denotes nothing existing in consciousness, no part of consciousness; it signifies only that consciousness comes into being when a stimulus or object acts on the brain. This statement, I may be told, is unfair: consciousness is a reaction on the object. Indeed the activity provoked by the object operating on the brain is the process of apprehending

[1] *V.* 3, p. 3; 4, p. 7; 6, p. 5; 7, p. 2; etc.

the object. This is Prof. Alexander's doctrine, but it seems either incompatible with his main position or irrelevant here. The object is not at all part of the apprehending, and one may doubt whether the statement that consciousness is the 'apprehension of an object' means any more than that there is a quality called consciousness on the occasion when the object[1] acts on the brain. What is denoted by the words 'of an object' is nothing in the awareness itself. Conation is awareness *per se*, and is not awareness of anything. This criticism seems to be supported by the interpretation given to cognition as 'togetherness' in 8, § 4. Knowing is there reduced to mere togetherness in the same universe, and the relation of 'knowing' is said to hold 'between any two finite things within one world'. The reference to the object is no more part of mind than the reference to one tuning fork is part of another which the first one stimulates.[2] Other theories may regard reference to an object as part of a mental process, though they sometimes have difficulty in explaining what the 'reference' means. But these other theories do not draw the sharp line between the process of knowing and the object known which we find in Prof. Alexander's view; and this dualism seems to preclude him from following their example.

Mind on this view becomes a very attenuated existent. It is in incessant movement, passing from one state to another. But the terms of the movement are nowhere discoverable, and there is no hint of what it is that is in motion. As we have already seen, we are not helped by the contention that mind is spatial; for that merely adds another field which mind has to fill, without adding to its power of doing so, without giving it any more body and substance. We may fairly grant that mind is inseparable from its movement, and is not a compound of static substance plus movement. But on the other hand, mere movement is nothing actual; and mind has come perilously close to that nonentity. Mind is a moving colourless quality—a restless ghost; and the brain is the place it haunts. It is not easy to believe that this ghost has substance and strength enough to jostle its way into existence and take a place in the temporal (and spatial) order as a real fact. It is extraordinarily like a hypostatised abstraction.

This result reinforces the previous criticism that Prof. Alexander tends to indicate and describe elementary psychical differences only indirectly. If the objective reference is cut

[1] Or something else, as in imagination, etc.
[2] *V. loc. cit.*, p. 318.

away from mental states, being actually no part of them, the indirect explanation becomes even less adequate, and mind becomes even more inscrutable and unintelligible. Prof. Alexander claims strongly that his view will not rob psychology of any of its present subject-matter;[1] if this be so, psychology will be unique among sciences in that its knowledge will be about things other than its own proper object. It will be in possession of a great abundance of clues to the nature of mind, but know virtually nothing of the mind itself.

Conclusion.—With great force and skill Prof. Alexander has clung to his initial assumption that mind is only a factor in experience and not the whole of experience itself. But is it not more natural to suppose that *experience* is what happens when a mental fact is said to occur? Experience for Prof. Alexander is a compound of a very ambiguous nature. It consists of a mind, which on examination is difficult to detect; plus objects which are said to be present to the mind or compresent with it, but only in the sense that they are in the same universe with it, temporal presence not being implied.[2] This makes its locus and nature very difficult to determine. Is it not better to reject Prof. Alexander's hypothesis and to accept what seems the simpler and clearer one, namely, that experience is the temporal fact, the real mind of which we are in search? If we take this view the difficulties which arise from Prof. Alexander's dualism fall away. No legitimate distinction in experience need be ignored, and no illegitimate ones inserted. Mind is concrete and subject to observation from first to last. At any rate it is no ghost.

Difficulties will be found in this view, and the chief of these will doubtless be metaphysical. I shall be told that the suggestion I have made amounts to Idealism, and Idealism has been exploded. Perhaps it does involve Idealism in the end, though I would point to some of the American Realists[3] and perhaps even—though more doubtfully—to Avenarius. But it becomes Idealism only when carried out to the end, and it is not necessary to go so far unless one wishes.[4] Nor is it clear that the damage to Idealism is at all proportionate to the noise of the bombardment it has sustained. But to discuss this would take us too far aside at present. Prof. Alexander's motive, if I understand him rightly, is to avoid every shade and suspicion of a representative theory of knowledge.

[1] *V.* 5, p. 249. [2] *V.* 7, p. 3, note. [3] If they are Realists.
[4] Apart from Realism there are various conceptions of 'presentation' which may afford a resting place.

In that I agree with him. But it is not clear that the end is best attained by means of his central dualism. He is left with grave metaphysical problems on his hands; one of which is how the appearances of things—the abstracted or selected aspects which alone get into experience—are connected together in one thing.[1] It is true that these aspects are not separate temporal facts; it is also true that their characteristics can not be attributed *simpliciter* to the whole of experience within which they fall. But on the other hand, they have some kind of being in experience, and they function there in ways unknown to stolid objective things considered apart from experience. Nothing is gained by trying to ignore this. In the interests of tidiness and the partition of things into neat parcels, it may be regarded as scandalous that the objective world should not stay at home respectably, but should come into experience and assist in a riotous life of appearances. But its escapades are notorious and cannot be hushed up.

[1] This problem concerns all dualistic forms of Realism.

III.—BERGSON AND ABSOLUTE IDEALISM.

By S. Radhakrishnan.

I.

The current democratic trend of ideas has taken in its direction even the narrow circle of thinking men. The philosopher's impulse of knowledge for the sake of knowledge has yielded to the practical man's knowledge for the fruits it bears, the consequences it results in. At the present day systems of philosophy have in view the business of life which is everybody's and try to do justice to the sense and values of the average man. He takes for granted certain things which he feels to be certain through immediate experience, the reality of the time process, of the individual, of his fight for freedom. He has no faith in absolutistic systems of philosophy which give him timeless absolutes and unmeaning evolutions. Bergson, solicitous about the claims of the average man, takes his stand on life and experience. He knows that his philosophy is so popular because of his attitude to experience. "Allow me then to say, that the spread of what men agree to call Bergsonism is due simply to this; the initiated see, and the uninitiated divine that they have here to do with a metaphysic moulded on experience (whether exterior or interior); with an unpretentious philosophy determined to base itself on solid ground, with a doctrine that is in no sense systematic, that is not provided with an answer to every question, and that distinguishes different problems to examine them one by one, a philosophy, in short, capable like science of indefinite progress and advance towards perfection" (Bergson, *His Life and Philosophy:* Ruhe and Paul). So Bergson rejects absolutism which runs counter to experience and intellectualism which seeks to solve all problems of life. Anti-absolutism and anti-intellectualism are the characteristic marks of Bergson's philosophy and have helped to make it so popular. But on closer examination, we shall see that Bergson's philosophy is more absolutist than it is generally known to be. If it is rid of its inconsistencies and interpreted logically, it will become identical with

absolutism of the concrete variety. We here propose to consider Bergson's account of the problems of the relation of life to matter, mechanism and teleology, intellect and intuition, the individual self, freedom and God, with a view to finding out whether his solutions of these problems are so far away from those associated with absolutism as he or his interpreters make us believe.

II. Life and Matter.

What is the absolutist theory of the relation of life to matter and both to the whole? In idealistic systems of philosophy, the play of the universe is looked upon as the manifestation of the creative joy of the one spirit. Activity is the essence of mind, and in its process of self-realisation the absolute mind goes forth into the forms of finitude and difference. The universe is the realisation of the nature of the Absolute. The Infinite life has to limit itself to become manifest. All forms are brought forth by his nature to manifest himself. This self-limiting power of the Absolute is called in Indian philosophy maya. His life appears as spirit and his maya as matter and these two are never disjoined during the manifestation. The supreme spirit is thus both force and matter, active and passive, male and female (Purusha and Prakriti). The supreme one in relation to the universe breaks into the inseparable two, self and not-self, subject and object, being and non-being. The formless, spaceless, timeless something which would remain if the Absolute should completely annihilate itself is what we call nothing. Being and nothing depend on each other. Subject and object are correlative functions. In all our experience we have this subject-object relation. These imply each other, are broken up out of the whole and attain their reality in the whole of becoming. When the two tendencies are postulated the rest of the work of the universe is only a struggle for one of them to dominate the other. In the lowest stage we have the pure externality of things to things, matter, where self is at its lowest and not-self at its highest. But still the purpose of matter is to serve the ends of spirit. It is the object of a subject. We discover a gradual spiritual ascent in plant and animal. This joy of spirit and life never comes to self-consciousness till we come to man. In man, the spirit has come to itself. The growth is thenceforward due to development from within and not pressure from without. Thus the whole universe is seeking more life and fuller. We have in the world the struggle of life against the lower tendency to

attain self-realisation. But throughout the universe we have the one principle of spirit manifesting itself in a series of forms which have the power of representing the whole in a greater or less degree. The history of the world has been a process of the return of the Absolute into itself, in the fulness of its self-consciousness. The evolutionary process of the world would be unintelligible without an immanent spiritual teleology involving a continual ascent from God's minute beginnings to ever higher forms of existence, up at last to man and superman. There is an underlying spiritual reality which is the source of evolution, and our consciousness is one expression thereof. The dissociation of the Absolute into the two, self and its other, constitutes the beginning of creation, and the work of the world is only an attempt to get back to the original wholeness through growth. The universe is just the way through which the abstract unity becomes a concrete totality. The world process is the becoming of the whole.

So matter, according to absolute idealism, is the lowest manifestation of spirit. It does not reduce matter to spirit, but points out that matter is there for the sake of spirit. It is there merely to pass over and return into spirit. That by which an organism develops cannot be external to it. Man is harnessing nature and adapting her processes to his ends. The external world is there for being used by man. It enables him to attain his freedom. Through conflict with it and conquest over it, man reaches his individuality and so nature is the home of the spirit, and Hegel is right when he says that mind is the truth of nature. Quite as much as Bergson or any other vitalist, absolute idealism holds that though life is evolved from the womb of mechanism and is dependent upon it, it cannot be looked upon as the product of mechanism. Thus absolute idealism distinguishes (1) the origin of the universe which is due to the dissociation of the whole into Being and Non-being, (2) the process of the universe which is the warfare of these two tendencies, where (3) the progress is measured by the supremacy of being over non-being, and (4) the goal or the destiny of the universe which is the complete supremacy of being over non-being, spirit over matter, when the Absolute comes to its own. But the end and the beginning are only ideal, and what we have is the pathway between the two called the universe where we are all pilgrims.

Let us ask whether Bergson admits the reality of a whole which becomes differentiated into the two, being and non-being, through the conflict and interaction of which the

process of the universe continues. He admits the reality of a whole which breaks up in twain. The nature of that whole is psychical. The absolute is a spirit. "The whole is of the same nature as the self" (*C.E.*). Bergson postulates a spiritual whole of which matter, etc., are forms. For in the historical evolution of the world, first comes inert matter, then life, etc. So whether Bergson calls matter the relaxation of spirit or the negative effect thereof, matter presupposes spirit. Only in matter spirit has not come to itself. In other words, matter is a low grade of spirit. The primordial spirit or consciousness falls asunder and breaks into two. On the one side we have spirit which is looked upon by Bergson as the creative tendency ever making for full and fuller freedom; on the other, it lapses into matter, absolute determination, mechanical adjustment and space. Creative life is the active determining element (Purusha); Matter is the passive and determined element (Prakriti). But there are no objects in the world which are purely spatial or purely spiritual. "Neither is space so foreign to our nature as we imagine, nor is matter as completely extended in space as our senses and intellect represent it" (*C.E.*, p. 214). "Although matter stretches itself out in the direction of space, it does not completely attain it . . . " (p. 219). Matter does "not wholly coincide with pure homogeneous space" (p. 230). There is neither spirit which is completely active nor matter that is completely passive. Matter and life we come across are both active and passive, struggling against each other. Both of them are kinds of order or activity, one vital, the other automatic. We cannot say that Bergson conceives matter as pure passivity, for matter is not nothing, as life has to take up forms forced by matter. Becoming alone is the true reality. Bergson does not view the world as dualistic. He does not consider that the world is broken up into two disparate portions. Life and matter are not two movements separate from each other, but are only two different tendencies or articulations which we discover in the one real. Reality is one though we can describe it as a struggle of two tendencies. It is a current which we call upward when the creative spiritual tendency is conquering, and downward when the non-creative tendency is conquering. Becoming alone which is the union of the two principles of being and non-being, is real. As Hegel would put it, being or life has an impulse to complete itself and so relates itself to non-being or matter and passes with it into the higher category of becoming. While becoming is the sole reality, conceptual thought discovers in it being and absolute nought, which is

its other. Reality is change, activity, or becoming. The history of evolution is the continuous becoming of the being by overcoming its other. The succession of living forms is just the attempts of being to overcome non-being. All the objects of the universe are mixtures of these two tendencies. The relative grades of the objects are determined by the more or less of the creative or the spiritual tendency. The hierarchy of values is determined by the more or less of spirit. The universe from its beginnings in crude matter to its heights in human persons is struggling towards the attainment of the whole. The life tendency is to create endless forms which advance in the direction of and beyond, man. When man gives up his subordination to matter, then spirit comes back to its own. But this goal is never reached in the universe. Here the struggle between the two goes on. For if it stops the universe comes to a stop. Neither of them can cease to operate. Creative evolution is a continuous becoming where we have the action of being conquering non-being, or non-being conquering being. Were the conquest ever complete, *i.e.*, were being without non-being to conquer, or *vice versa*, we should have then either pure being or pure non-being which are both abstractions. The very essence of creation is the strife of being and not-being. We see how what Bergson says about the classical systems of philosophy applies to his case also. He requires something negative or zero to be added to the original being before we can have the world of change. Bergson's conception of space corresponds to the "Platonic non-being, the Aristotelian matter—a metaphysical zero which joined to the idea, like the arithmetical zero to unity, multiplies it in space and time" (*C.E.*, p. 334).

When our attention is confined to the universe we see in the universe a struggle between the two tendencies. Bergson seems to conceive the possibility of real duration, pure and spiritual, without any taint of matter or non-being. Here we see a difference between the absolute idealist and Bergson. If we open our eyes and mind, and see the world of experience, we find it to be of the nature of becoming. The absolute idealists have no quarrel with Bergson on this point. In this becoming we shall soon be able to perceive that there are two tendencies of spirit and matter which both seem to regard themselves as equally real and fundamental and existing of their own right. This is the most natural attitude to take up for the unreflecting mind. But absolute dualism will not do as reality is of the nature of becoming. The two mix and coalesce into one whole. So we call them

tendencies upward and downward. They are the articulations which conceptual analysis reveals to us in the nature of the reality or in the process of becoming. As we find progress in the world or the strife of opposites, as they seem to be negatively related while sober second thought tells us they contribute to the ends of the whole, we say that the whole broke up into the two which are tending to come back to their original union. In this description which is given by Bergson and the absolutists, they are employing concepts, Bergson as much as absolutists. If this theory is true, then the two tendencies should have been present from the very beginning. There cannot be a stage where only one tendency is present. The two are correlative like subject and object. When here and there Bergson suggests that the two are accidentally related, we cannot follow him. For in Bergson the two must be fundamentally related. Everywhere Bergson admits spirit acts upon matter. It cannot put one step to the front or move out of its circle were there not matter everywhere confronting it, pulling it out as it were. If this is the relation of spirit to matter, then it cannot be an accidental relation but an essential one. But Bergson seems to admit the exclusive reality of pure or absolute duration. This seems inconceivable. Perfect duration would mean perfect activity. But perfect activity without something to resist, is a contradiction in terms. For according to Bergson we cannot conceive of activity or force unless there is something against which it can force itself. The life force is unintelligible without something to push itself against or exert force upon. Bergson is very severe against the absolutistic conception of being. Whatever the absolutists might say about its dynamic spiritual energy, he persists in calling it motionless being which we are taught to take for nothing. But we ask what about the spiritual current which has nothing to push itself against? Is it not to be viewed as a static blank? Our point is that the upward current of life would have nothing to push itself against, if there was no matter. It would not have been a current or activity at all. Matter is the resisting obstacle and as such the necessary means of the spiritual activity. But Bergson seems to admit the possibility of one of these tendencies existing apart from the other, for he says matter is spirit relaxed, pure activity condensed, duration precipitated. If matter is the arrest or interruption of spirit, what causes the interruption. If the inhibition of spirit is due to the collision with matter, we are begging the question. Bergson cannot explain matter as due to the alteration of the upward spiritual current in the

inverse direction. That it alters and *that* in the inverse direction are purely assumptions. If these assumptions are accepted, then it follows that till the particular point where the upward current altered its course was reached, there was no matter at all. But this contradicts Bergson's view that spirit, whichever way it turns, meets with matter, collides with it. Bergson is not able to give any satisfactory explanation of the interruption or fall. No reason is given. It is there. It is the downward movement potential in the upward. We have the capacity for detension in our consciousness. This means that spirit contains within it the potentiality of matter. With spirit there is matter. Surely we do not have first spirit, then matter, and then resistance between the two. Matter is a primal tendency of life and not an interruption of it. Bergson is truly absolutist when he holds that the dualism is not absolute. The two opposite tendencies are unthinkable except in relation to each other. They are the two aspects of the one effort. They are recognised in and through the struggle with the other. We do not know what each is apart from the other. Bergson is not consistent with his better and more logical self when he suggests that what exists first is the unhindered movement of spirit, and later comes its arrest; from that point onwards the struggle commences. He is logical when he says that from the beginning spirit collides with matter, that matter is contained in spirit as consciousness contains its detension. The two tendencies are present from the start opposing each other, and making for richness and variety in the one life-process of the world.

The becoming of the world is constituted by the two tendencies of life and matter. From the *elan vital* the whole universe develops by divergent evolution. The *elan vital* and the force that opposes it have also a common origin, and so the life and matter of Bergson correspond to the self and not-self of the absolutists. One is the spiritual tendency which by overcoming the other material tendency makes for progress. In the lowest stages, the material tendency has in a sense conquered the spiritual; and we have there neither indetermination, nor choice, nor freedom. The not-self is in the ascendant and all the changes of the material universe are purely repetitory. Simply because it has not the characteristics of spirit we cannot say, it has nothing to do with it. Reality to Bergson as to the absolutists is spiritual, but this spirit lapses in the lowest stages where the automatic tendency is relatively supreme. That even matter is not pure non-being Bergson admits, when he says that intellect

does not give us a true picture of the material world, for it exaggerates its material character. Were matter completely material, intellect would be able to show us reality as it is. Then intellect would become intuition, for it is the nature of intuition to give us things as they are. From this lowest stage, spirit is slowly progressing. We have life, and as this life takes on more freedom and indetermination characteristic of spirit, consciousness appears and life becomes elevated to the next higher stage of animal life. Soon the animal consciousness becomes associated with reasoning, etc., and gets transformed into the human mind, and this human mind is also a stage to be surpassed.

That all these may well be looked upon as the higher and lower forms of spirit, whose nature is activity or becoming Bergson admits when he says that all reality is a becoming or an unfolding. Reality is throughout psychical, and one of its indispensable characteristics is embodied in matter, in the pure externality of things to each other. The nature of a psychical content is to change, and this change is present everywhere, and in some cases where consciousness is needed it makes its appearance. The ultimate nature of reality is that of our inner life which is mind, spirit, freedom. All other reality differs from this only in degree and not in kind. According to Bergson, between matter and perception of matter it is only a difference of degree. Reality is a whole, concrete and universal, holding together in indissoluble unity aspects which in abstraction from one another and from their unity in the whole are contradictory, absolutely exclusive and even destructive of one another. Life and matter appear diametrically opposed in their nature and properties and the ends they have in view. One seems to be working against the other. But they are so only when they are abstracted from the whole to which they belong. In the whole they are found to live in a harmony; apart from it, they say 'kill me' or 'I shall kill you'. The opposites are opposed to one another and not to the unity. As Hegel would put it, the only reality is the concrete universal. The opposite aspects are mutually dependent, though antagonistic moments of the universal. The pulse-beat of the universe is constituted by their unending strife. This is Hegel. This is Bergson. Only Bergson seems to consider the strife to be the end of things, the ultimate expression of the universe, while Hegel holds that their negativity is cancelled in the whole viewed from a broader standpoint than that of narrow individual existence or experience. Reality ceases to be a strife of opposites and becomes a whole where the parts are mutually indispensable.

Their seeming negation expresses the aspect of strife in the real. Reality is neither pure being nor pure becoming, neither one nor many, but a being in becoming, a one in the many. We shall revert to this topic at a later stage. There are passages where Bergson views the universe of change as the progressive realisation of the ideal of the one in the many. What Bergson speaks of as life and its evolution, is really spirit and its evolution. . . . "As the smallest grain of dust is bound up with our entire solar system, drawn along with it in that undivided movement of descent which is materiality itself, so all organised beings from the humblest to the highest, from the first origins of life to the time in which we are and in all places as in all times, do but evidence a single impulsion, the inverse of the movement of matter, in itself indivisible . . ." (*C.E.*, p. 285). The evolution of the spirit into the universe is the everlasting realisation of the ideal of the one in the many. Throwing itself into endless species and individuals it appears as many different lives. This is difference or plurality; but there is also sameness or unity. There is one and the same life-force at work. One life has assumed infinite diversity of forms. Individual lives are but the forms of the over-individual universal life. "Charged from the outset with the infinity of the diverse psychic potentialities of the species and individuals which were yet to be, life realised all its latent possibilities by branching in many different directions without sacrificing the unity of its original concentrated form." Life-process is the progressive realisation of the one through the many. It is the supreme instance of the highest form of the universal which we call 'concrete identity'. Though Bergson is not clearly conscious of it, still the logic of his argument compels him to consent to the reality of a whole in which strife is.

While the absolutist considers the two tendencies to be those of self and not-self, Bergson calls them life and matter. Here Bergson is wrong. For if mechanical explanations cannot account for vital phenomena, as the properties possessed by organisms are different from those of crystals, then we may well ask whether purely biological explanations will account for conscious phenomena, and psychological explanations for moral values. In the process of evolution, we have gaps not only between the organic and the inorganic, but also between the physiological and the organic, the conscious and the physiological, the moral and the conscious. It is an arbitrary procedure to say that life and matter should be distinguished, as physico-chemical explanations will not suffice for vital phenomena, but content

oneself with saying that consciousness and morality are only stages of life. If consciousness and memory, logic and morality can be looked upon as two grades of life, in spite of the fact that the laws of organic growth are inadequate to account for the conscious and moral phenomena, in exactly the same manner as mechanical explanations cannot account for organic objects, why can we not look upon matter also as a phase of life, lower than organisms? Either we should consider all these, men, animals, plants and minerals as stages of the one essence, or the world must be looked upon, not as the warfare of two tendencies, life and matter, but four principles, matter, life, consciousness and reason. Bergson with the absolutists is willing to reject the latter alternative. He is anxious to establish a monism, notwithstanding the struggle of the world. If so, is it not better to use a term which is not so closely associated with one of these stages as life? It will not do to call them all stages of life as this term is closely associated with biological phenomena. We shall have to say then, that all these are higher and lower forms of the one essential spirit. The whole manifests itself at one stage as matter, at another as life, at the third as animal consciousness, at the fourth as human intelligence. They are all forms of spirit at different stages. Instead of saying they are types of organisation due to life, we should say they are grades of spirit. As a matter of fact, Bergson is not very careful in his use of the word Life. Life and consciousness are sometimes used synonymously. Life sometimes refers to the vital phenomena. We can distinguish broadly three different usages, (1) *the supra-conscious whole* which breaks into the two. Or (2) *the upward current* which comes into conflict with the downward: "Life as a whole, from the initial impulsion that thrust it into the world, will appear as a wave which rises, and which is opposed by the descending movement of matter" (*C.E.*, p. 284). Life is "essentially a current sent through matter, drawing from it what it can" (p. 280). Or (3) *the process of becoming* which is due to the interaction of the two, consciousness and space, being and non-being. "Life is consciousness launched into matter." "Consciousness is distinct from the organism it animates, although it must undergo its vicissitudes" (*C.E.*, p. 284).

Bergson bases his extreme opposition of life and matter on the ground that while in the physical world, changes are external, being merely displacement of parts, in the world of vital phenomena, change is internal, being genuine creation of novelty. In the physical world time does not enter, and

the present is determined by the past according to necessary relations which science may discover; in the world of vital phenomena time is very real, and the future is undetermined by the present. Predictability is possible in the world of physical phenomena as all is given at the outset and everything is mechanically determined. In the vital world, which is free and spontaneous, predictability is impossible. Bergson again and again emphasises the creative character of life and compares it to the ripening of a process, while the movement of the physical world consists in a mere reshuffling of the old elements. Bergson emphasises the discontinuous and contingent nature of life. But a closer examination reveals to us that life is not so full of surprises as we are led to believe. Even Bergson insists on the continuity of life. Its future is not discontinuous with its past. Unless there be something common he would have no right to say that the life-process is one continuous whole. Emphasis on the continuity of living processes means connexion between the past and the present. To that extent contingency is excluded. The only difference between the two lies in the kind of action. While mechanical acts are determined externally, vital acts are determined internally. But from this, to infer that the activities of the one are rigid while those of the other are free, is wrong and untrue to facts. Organisms are determined from within, by their own nature, while crystals are determined from the outside. When Bergson has an eye on facts, he sees clearly that life is not a series of takings by storm or leaps from one thing to another, but a continuous evolution. As for novelty it is not the property of vital phenomena only.

All that Bergson has established is that organisation is not manufacture, nor is an organism a machine. We cannot submit life-process to mathematical treatment. "Astronomy, physics and chemistry cannot account for life phenomena. Calculation touches at most certain phenomena of organic destruction. Organic creation . . . we cannot submit to a mathematical treatment" (*C.E.*, p. 21). Life cannot be resolved into matter and motion. Mechanical categories are not an adequate explanation of life-process which resembles more the life of mind than that of the mineral. But this does not mean complete discontinuity between the two. . . . "We do not question the fundamental identity of inert matter and organised matter." "That life is a kind of mechanism I cordially agree" (*C.E.*, p. 32). The vitalists and the absolutists have an eye on both the continuity and discontinuity of life and matter. They

agree with Bergson in thinking that pure mechanism is insufficient for accounting for the life-phenomena ; but they do not rush to the conclusion that therefore life is in every way opposed to matter. Bergson starts with an absolute opposition between the organic and the inorganic. But he has no right to do so, as there is as much opposition between the organic and the conscious, and the conscious and the intellectual. If life is a fight against matter, consciousness is a fight against life. But if there is continuity between life and consciousness, then there is continuity between life and matter. Bergson cannot have much objection to the idealist solution of life and matter. In life matter is not destroyed but only transmuted. Life is not the destruction of matter; but only its transfiguration. The properties of matter are caught up in a higher synthesis. The idealist as much as Bergson emphasises the uniqueness of life. He knows that it cannot be reduced to an aspect of matter. Life is more than mechanism, but is still born in it. To him life and matter are higher and lower aspects of a single reality.

That the two, matter and life, are not absolute opposites but relative differences in a whole promoting the one unity of spirit comes out from Bergson's writings. "Life must be something which avails itself of a certain elasticity in matter" (*Life and Consciousness*). "Life seems to have succeeded in this (overcoming the resistance of matter) by dint of humility, by making itself very small and very insinuating bending to physical and chemical forces, consenting even to go part of the way with them. . . . Of phenomena in the simplest forms of life, it is hard to say whether they are still physical and chemical, or whether they are already vital. Life had to enter thus into habits of inert matter, in order to draw it little by little, magnetised as it were, to another track" (*C.E.*, pp. 103-104). Bergson's other point that matter is only the relaxation of spirit suggests the idealist contention that mind has only to reveal the mind in matter. Matter, according to Bergson, is congealed mind, or mind come to rest. Materiality is what life itself assumes. Life is only the truth of matter, as in Hegel mind is the truth of nature. In Bergson while both matter and mind are looked upon as movement, they are different because matter is self-repeating movement, while mind is creative movement. Consciousness and memory distinguish mind from matter. Memory is just the way in which the past persists in the present. The persistence of the past in the present is common to both matter and mind. But as mind

is essentially creative, it retains the past not by way of simple repetition or mere unaltered reproduction, but in a different way which is called memory. So memory is only the special form which the common feature of the persistence of the past in the present has assumed in the case of mind which is creative movement and not self-repeating movement. Consciousness again does not distinguish matter from mind absolutely, for to Bergson matter consists of images, which we would perceive, were our perception pure, *i.e.*, unadulterated with memory and sensation. These images can exist without being perceived. They generally so exist in matter, for as there is no indetermination in it, it has no consciousness. But when it enters the living body the movement is held up for a time in the zone of indetermination provided by the nervous system. This arrest makes it become a conscious perception. Matter is thus, only mind which through losing its indetermination no longer has need of either consciousness or memory. Consciousness and memory, then, are not points in which mind differs from matter absolutely, but rather the consequences of what according to Bergson is the fundamental difference, namely, the disappearance of novelty. Whether it is so fundamental, is, as we already stated, open to debate. It is strange that while absolutist thinkers make mind and matter differ in essential respects but still view them as phases of one whole, Bergson, while minimising the distinction, is not willing to consider them as belonging to one whole. But this absolutist conclusion is the logical implication of Bergson's argument. When he says that the nature of the whole reality is psychical, it follows that life and matter are means to each other. They are parts of one whole, to be regarded as higher and lower phases of it.

(*To be continued.*)

IV.—ON CERTAIN CRITICISMS OF PLURALISM.

By C. A. Richardson.

I.—Introduction.

It is incumbent on anyone who attempts to establish and develop a pluralistic view of the universe, to consider, and, if possible, to meet certain vital criticisms which have been urged against such a view. The answers to these criticisms must be prefaced by a brief indication of the standpoint from which they are approached.

The present writer regards a spiritualistic pluralism (essentially such, for example, as that maintained by Dr. James Ward) as the most satisfactory hypothesis on which to base a system of philosophy. It is satisfactory, in the first place, on account of the fundamental conceptions from which it starts. These are perfectly definite and easily realised. Secondly, it affords a most promising method of attacking and of partially or completely solving some of the outstanding problems of philosophy.

In the course of the development of this hypothesis, however, it becomes clear that alone it is incomplete. This is to be expected, for the history of philosophy shows that no system can hope to approach within measurable distance of its object which lays undue stress on either of the dual aspects of the universe (its oneness and its manyness) to the neglect or exclusion of the other.

We find, accordingly, that criticisms of pluralism fall mainly into two classes, those which demonstrate its incompleteness as a final answer to the questions which it seeks to resolve, and those which are aimed at supposed flaws radically inherent in the hypothesis itself. As has been indicated, the former may be regarded as justified, but the latter call for an answer, and it is with certain of them that we are here concerned.

Of the great philosophic systems of the past, the Monadology of Leibniz is perhaps the most remarkable for the logical skill with which it is sustained, and for the keen insight manifested in the fundamental principles on which it is based.

From it all modern pluralisms derive their central theme. But two centuries of criticism have ensured the evolution of systems in which the more prominent weaknesses of the original monadology find no place. These later systems drew inspiration afresh from the great biological advances of the last century, advances made in the light of the doctrine of the evolution of species, a doctrine already foreshadowed in Leibniz' celebrated Principle of Continuity.[1]

Yet there remained in pluralism certain vulnerable points which its opponents were not slow to attack. With all the criticisms thus put forth it is both impossible and unnecessary to deal at length. The most important of them are to be found in the writings of two men: Prof. Pringle-Pattison[2] and Dr. Bosanquet.[3] If the objections there urged can be successfully countered, the chief difficulties which block the path of the modern pluralist (not necessarily as regards philosophy in general, but as regards pluralism in particular) will be swept away. Accordingly, it is with the criticisms put forward by Prof. Pringle-Pattison and by Dr. Bosanquet that we are called upon to deal.

II.—Externality.

For the pluralist, the environment of the self or subject of experience consists in other selves or subjects whose mentality differs from his only in degree. This belief is attacked by Dr. Bosanquet in a criticism which may be summed up essentially somewhat as follows: "[Selves] as inward centres in the popular sense [cannot] form the circumferences for each other,"[4] and again, "Even if there were, *de facto*, a psychical something underlying matter, yet it is only as definite externality that it plays a part in our life. We have no use for it *as* inwardness."[5]

Now the true implication of these sentences is by no means evident if we inspect them as they stand. The spatial metaphor involved in the use of such words as "centre," "circumference," "inwardness," "externality," tends rather to obscure the issue, though the introduction of that metaphor may be very convenient and to a certain extent necessary.

[1] The doctrine of pre-established harmony shows, however, that evolution, as we now understand it, did not enter into Leibniz' conception of the universe.

[2] In *The Idea of God in the Light of Recent Philosophy.*

[3] In *The Principle of Individuality and Value.*

[4] See, *e.g.*, *op. cit.*, p. 75 ff.

[5] *Ibid.*, p. 194, note. These quotations summarise the idea involved and explained at length.

But what does this distinction between "inwardness," and "externality" really imply? Evidently "inwardness" is something which essentially characterises the individual subject, at least *for* that subject, whereas "externality" is something which characterises (for him) the not-self. Hence the distinction between "inward" and "external" refers ultimately to the fundamental distinction within each individual experience of subject from object. Consequently, if the pluralist asserts that the object of experience of one subject consists of other subjects, Dr. Bosanquet's criticism becomes in effect, "How can a subject of experience be, in any circumstances, an object of experience?"

In this form the criticism is justified, and the pluralist is wrong *if* he asserts that to any subject other subjects are presented as objects of experience. Before considering the latter point, however, it should be noticed that in any case the criticism only applies to pluralism incidentally. At the root of it is the fact that no existent entity can be an object of experience. No entity other than myself can be given to me as an object of knowledge in such a way that I realise what it is in its actual essence.[1] We cannot in experience *know* anything else as it really is in itself.

What, then, of the sense-data which form for each individual his object of experience? They are objects of acquaintance-knowledge. Are we to say that they do not exist? Strictly, it is neither true nor false to say that they exist. It is meaningless. There is no significant sense in which existence can be asserted of the immediate data of perception. *There they are*, and that is all that can be said of the matter. Accordingly we must regard the object of experience not as one or more existent entities, but as the "appearance" to the subject of existent entities other than himself. This fact of "appearance" or "presentation," being ultimate in nature, defies satisfactory definition. It might be provisionally indicated somewhat as follows: Given a percipient subject and certain other existent entities, under suitable conditions, of which the existence of these other entities is the most necessary and important, the given subject will perceive an object which may be defined as the "appearance" to him of the other entities. It is important to notice that this "appearance" *is* neither the given subject nor the other entities, though its being is dependent on the existence both of the subject and of the other entities.

[1] I do not mean to imply here that even the self is given as an *object of immediate knowledge* in experience. I have dealt with this point more fully in an article in the *Philosophical Review*, vol. xxvii., 3 (May, 1918), p. 240 ff.

Prof. Pringle-Pattison[1] also makes a brief reference to the point under consideration. He remarks that "internality is impossible without externality". This, as we have seen, is equivalent to saying that a subject of experience is inconceivable apart from a presented object of experience. But the latter is simply the appearance to the subject of other existent entities. It is not itself to be classed as an existent entity, though it has *being* in the sense that *it is there*. A subject, however, to whom no appearance is presented is just as inconceivable as an appearance presented to nobody.

It follows, then, that Dr. Bosanquet's criticism does not apply in any special way to pluralism, but is really an expression of the fact that an existent entity cannot be an object of knowledge. In particular, an experiencing subject cannot be an object of knowledge. But pluralism is in no way bound to assert this impossibility. For pluralism, the living experience of the subject consists actually in his interaction with other subjects. This interaction is manifested in the ever-increasing differentiation of a presented indivisible whole or object of experience, namely, the *appearance* to the subject of other subjects. We are not acquainted in sense-experience with other individuals in their actuality. Selves cannot be reduced to sense-data. The latter are but what we have termed the "appearance" to us of other selves.

We may conclude our reply to this type of criticism by briefly considering another quotation from Dr. Bosanquet. In pan-psychism, he asks, "what becomes of the material incidents of our life? . . . Is it not obvious that our relation to these things is essential to finite being, and that if they are in addition subjective psychical centres their subjective psychical quality is one which so far as realised would destroy their function and character for us?"[2]

Now the nerve of this criticism is destroyed, as before, when it is realised that for a given subject the object of experience does not consist in a number of other "subjective psychical centres," but in the *appearance* to the given subject of these other subjects. Moreover, the function of material incidents in our life consists in the determination and limitation of our purposive activity. It is simply the manifestation of our interaction with other subjects. In fact, it is here that the fundamental ambiguity of Dr. Bosanquet's term "inwardness" as a characterisation of subjective centres becomes completely evident. For the activity of the subject is essentially "outgoing" as it were. It is not

[1] *Op. cit.*, p. 178 ff. [2] *Ibid.*, Lect. X., p. 363.

directed in upon itself (if that could have any definite meaning), but out towards others. How, then, is it possible that the development of this psychical quality can destroy the function of the subject with regard to other subjects? The growth of experience, in the pluralistic view, does not and cannot consist in a gradual withdrawal into itself of the subject, culminating in a complete isolation, but in continuous interaction with other subjects which, so far from leading to individual isolation, aims rather at mutual co-operation in ensuring the interests of the society as a whole

III.—Consciousness.

Dr. Bosanquet's conception of consciousness is in entire conflict with the position which pluralism takes up. But his view is largely vitiated by the fact that he adopts on this point an attitude which appears to tend very strongly to that Cartesian dualism of mind and matter, which for so long clogged the progress of philosophic thought. This tendency is particularly evident in his treatment of the relation of body and mind. The pluralist, on the other hand, recognises that the fundamental fact from which the start must be made, is not a dualism of matter and mind, but the unity of the individual experience, which comprises a duality of subject and object. For the pluralist "mind" is a generic term denoting the class of subjects of experience.

According to Dr. Bosanquet "organic regulation is natural and immanent, but independent of consciousness".[1] Consciousness is a "perfection" granted by the Absolute in certain circumstances.[2] Such statements imply that matter is given as prior, while mind only supervenes at a certain stage of the development of matter. This seems to approach perilously near to the epiphenomenal view. Moreover, even if we grant with Dr. Bosanquet that organic regulation is "natural and immanent," what evidence have we that it is "independent of consciousness"? Apparently the reference here is to the fact that the behaviour of an organism (especially of a lower type) consists largely in reflex action. The question is then whether the establishment of reflex action presupposes mind or not.[3] Now we have an abundance of

[1] *Op. cit.*, Lect. V., p. 195. [2] *Ibid.*, p. 189.

[3] Of course it is a well-known fact that established reflexes occur without the intervention of the *dominant* consciousness of the organism, but it by no means follows that the latter played no part in the original establishment of the reflex, nor that, even when established, the reflex is independent of *any* consciousness. On all these points see also J. Ward, *The Realm of Ends*, 2nd ed., p. 462 ff.

examples of such presuppositions—a simple case being a man learning to ride a bicycle. In fact the formation of habits is a fundamental characteristic of mind. On the other hand, there are no cases in which we observe the establishment of a reflex action where we can infallibly assert the absence of mind.

It is the essence of the pluralistic position to recognise that the start must be made from individual experience, which implies mind. It is the task of the pluralist to interpret matter from this standpoint. On the other hand, if we start from matter, how can we interpret mind? There is nothing in what Dr. Bosanquet says on the subject which provides a satisfactory answer to that question. But from the standpoint of mind there is no such difficulty in interpreting organisms, at least. The striking feature of an organism is the fact that it exhibits "behaviour" analogous in every way to our own. Hence, what the subject distinguishes within its objective experience as organisms are, for the pluralist, the appearance to the subject of other subjects differing from himself only in degree or in kind of mental development.

Speaking again of consciousness, Dr. Bosanquet says that "conscious process is meaning (or appreciation) not effect, of physical process"[1]—and in another place: "Mind is the meaning of externality, which under certain conditions concentrates in a new focus of meaning, which is a new finite mind"[2]. It is not easy to assign a definite significance to these assertions. In the first place "meaning" and "appreciation" are by no means synonymous terms. They apply respectively to the objective and the subjective aspects of the process which consists in the interpretation of an object by an individual subject. In other words, we regard the subject as "appreciating" the "meaning" of the object. It is difficult to see in what sense, if any, consciousness may be considered as "meaning". For the latter term implies both an object and a subject *for* whom the object has meaning. We cannot regard the subject as being a "meaning". If we attempt to do so, we are bound to imply a further subject,[3] and are thus led into a continuous regress. Moreover, Dr. Bosanquet fails apparently to distinguish clearly between sensations and the mind of which they are the sensations. It is not clear whether the mind or the sensations constitute

[1] *Op. cit.*, p. 196 ff., margin. [2] *Ibid.*, App. II. to Lect. V., p. 220.

[3] Even here there is a difficulty. For, as we have seen, a subject cannot be an object of knowledge, and anything which has "meaning" for anybody must in some sense be an object of knowledge.

the meaning of physical process.[1] But, at all events, we cannot suppose mind to be simply the "meaning" of something else. "Meaning," though it implies a subject, is not itself that subject. Nor does it help us to adopt the term "appreciation" instead. For the subject is not the appreciation, but the individual who appreciates.

The conception of a mind as a "focus" of externality also appears to have no valid significance. As we have seen, the only legitimate meaning that can be given to the term "externality" is "the objective side of experience". But we cannot possibly conceive the subject as consisting in the "concentration" of sense-data into a "focus". To use Dr. Bosanquet's terminology, internality can in no way be constructed out of externality. The term implies the fundamental distinction in experience between subject and object. We might perhaps speak (very loosely) of the subject as concentrating externality, by his unifying activity, into a focus. But externality thus focussed would be the product of the subject's activity and not the subject himself.

IV.—The Evolution of Law.

In the type of pluralism advocated by Dr. James Ward, the laws of inorganic matter, commonly called the "Laws of Nature," are regarded as having evolved in time, only reaching their present fixed and stable form after a long process of development. Prof. Pringle-Pattison raises objections to this view. According to him we cannot suppose the possibility of action without environment, nor can we conceive the interaction of monads, even in the beginning, apart from laws in accordance with which that interaction takes place.[2] And again: "A system of unvarying natural order is demanded, it may be pointed out, in the service of the higher conscious life itself, as the condition of reasonable action".[3]

Now, in the first place, it may be admitted that action is impossible without environment. But pluralism does not deny this. The environment of a monad is constituted by the other monads, with which it interacts. And, coming to the further point, Prof. Pringle-Pattison is evidently right in so far as he asserts that the monads must always have had *some* nature. But by the evolution of natural laws, the pluralist simply means that the laws of nature did not always exist in their *present* relatively fixed form. It must be remembered that such laws are not, as it were, *imposed* upon

[1] *Op. cit.*, p. 197. [2] *Ibid.*, p. 183 ff. [3] *Ibid.*, p. 187.

things from without, but are merely descriptions of the way in which things behave. Consequently, if the behaviour is modified, the descriptions or laws are correspondingly modified also; though in certain cases behaviour may tend to a comparatively fixed system of habitual reactions, in which cases we may speak of a fixed law.

The attitude of pluralism on this point may, perhaps, be made clearer by an illustration. In the first place it must be noted that, for the pluralist, there is no absolute gap between organic and inorganic matter. Now if we survey the realm of organic matter, past and present, we find that whereas some species continue to develop into more and more complex types, others have, after a long period of development, eventually approached a stationary condition in which their actions have become practically entirely habitual and relatively fixed in nature. Inorganic matter may be regarded as an extreme form of such stationary species. Hence there is no difficulty in supposing that inorganic matter has evolved into its present condition, and it is in this process that the evolution of the so-called "laws" of matter consists. There is obviously no reason to suppose that a limit must be placed on the number of these laws. Hence we may consider that originally each monad, while displaying the general characteristics of mind in a low degree, was yet, in its particularity, a law unto itself. Only as interaction proceeds is there a tendency for individuals *en masse* to behave in similar ways. This tendency proceeds from the characteristic, which must be present in some degree in each individual, of learning by experience.

As to what Prof. Pringle-Pattison says of the necessity for a system of unvarying law as the condition of reasonable action in higher conscious life, it certainly seems probable that the tendency of the individuals composing inorganic matter to develop a system of habitual reactions has greatly aided the process of evolution of other individuals to higher and more complex types. Yet it must not be forgotten that each of us has to deal not only with material objects but also with persons. Although the behaviour of the latter does not admit of description to a degree of precision in any way comparable with such principles as the law of gravitation, for example, yet we do not find it impossible to live a rational social life on that account. In dealing with individuals whose behaviour is subject to continuous modification and development, the only necessary conditions of success are that the process of development should not be too rapid, and that we should have a knowledge at least of the general trend

of that process. Such knowledge would itself be embodied in a law, but of a different type from those we consider in general under the conception of the evolution of law. For it would be the description of a dynamic process and not of a static form of behaviour.

It is evident, then, that the notion of the laws of nature as evolving gradually into their present stable form is not a contradictory one. For the evolution of law means nothing more nor less than the gradual modification of behaviour. We have examples in plenty of such modifications, and we find that in many cases the process tends asymptotically, as it were, to a limit, and we have species, which, after developing through countless ages, become relatively fixed. *Relatively*, we say, for there is no guarantee that even the laws of inorganic matter will, after the lapse of future vast periods of time, remain in their present form without sensible alteration.

V.—The 'Bare' Monad.

All mental life of which we appear to have clear evidence, is associated in every case with an organism. The pluralist conceives the organism as a system of monads in association with a dominant monad, the latter constituting the self of which the organism is the body. But if we press the pluralistic hypothesis far enough, we seem bound to postulate, somewhere or somewhen, the existence of 'bare' monads, *i.e.*, monads unassociated with any body or organism. Prof. Pringle-Pattison points out objections to this view.[1]

Leibniz endeavoured to avoid the difficulty by assuming that *every* monad was associated with an organism composed of relatively inferior monads. For him, a piece of inorganic matter was a mere collection of organisms. In this way he piled infinity on infinity. We cannot be satisfied with such an endless regress. Nor does it really clear away the obstacles in any very definite manner, for it is difficult to see how, in considering the relations of organisms external to one another, we can entirely avoid the notion of the interaction of bare monads.

But, in any case, there seems to be no intrinsic difficulty in the conception of a bare monad. There is apparently no inevitable reason why that peculiar complex of presentations[2] which constitutes what we call 'the body' should enter as an element in every experience. A bare monad

[1] *Op. cit.*, p. 188.

[2] Not only of sight and touch, but also that mass of organic sensations which constitutes what is called "general sensibility".

would simply be a subject from whose object of experience this element was absent, and there is no way of showing that its absence is an impossibility. No doubt there is a difficulty of another kind, if we try to hark back to the monads as they originally were. For there is bound to be a difficulty here, but it lies, not in the notion of a bare monad, but in the inherent incompleteness of the pluralistic hypothesis. We are faced, in short, with the problem of Creation, which pluralism alone is powerless to solve. Yet one word of warning is necessary. Prof. Pringle-Pattison seems, in one place, to identify the bare monad with what lies behind the atom, or whatever the ultimate physical particle may be.[1] This is quite unjustifiable. Physical objects, whether they be common-sense objects such as chairs and tables, or entities such as atoms and electrons, are conceptual constructions based on sense-experience, and therefore have a purely formal existence.[2]

If the truth be told, the bare monad is not the real root of the trouble at all; the latter must be sought rather in the conception of interaction between the monads—and this applies just as much when the monads are members of one organism as when they are not. We need some concrete ground of this interaction, which shall serve as a principle of unification whereby the existence of selves forming a plurality, and yet entering into relations with one another, may be rendered intelligible. Although the start must be made from a plurality, and although the pluralistic hypothesis will carry us a long way in the understanding of the world, we must take account at the latter end of that other aspect of the world—its unity. With the further consideration of this question we are not here concerned. Suffice it to say, as in the introduction above, that such limitations of pluralism as are implied in this matter may be freely admitted.

VI.—Summary and Conclusion.

It would appear, then, that the most important criticisms recently directed against pluralism fail of justification. We saw, in the first place, that there is no more difficulty in accounting on the pluralistic hypothesis for what Dr. Bosanquet calls "externality," than on any other hypothesis,

[1] *Op. cit.*, p. 180.

[2] "This table" and "an atom" are alike capable of being exhibited as logical constructions of sense-data, though the latter is a more complex construction than the former. See B. Russell, *Our Knowledge of the External World*, Lects. III. and IV.

provided that we interpret that term correctly. It can only mean the object as distinguished from the subject of experience. For pluralism, the object of experience does not consist of other subjects (as Dr. Bosanquet's criticism implies), but of the appearance of these other subjects to the individual subject considered, where "appearance" is defined in some such way as we have indicated. These "appearances" cannot be said to *exist*, for no existent thing can in itself be an object of knowledge, though they have being in the sense that they are there.

Secondly, Dr. Bosanquet's account of consciousness does not agree with the facts. We have no reason whatever to assert that organic regulation is independent of all and every kind of consciousness. On the contrary, wherever we can observe the formation of a habit culminating in reflex action, it is associated with mind. Thus, whereas we have instances of reflex action presupposing the existence of mind, we have no instances of such action where mind can be certainly asserted to be absent.

We cannot construe consciousness merely as the *meaning* of externality. Such an interpretation is inherently contradictory. For, using the term legitimately, we speak of the "meaning" of an object *for* a conscious subject. We cannot significantly regard the meaning of objects as *actually consisting in* conscious subjects. Nor can we look upon externality as gathering itself up into foci which we call conscious subjects. No such attempts to get the subjective out of what is essentially objective can possibly succeed. Externality is not the less externality because it is concentrated into a focus, if for the moment we allow such a loose and metaphorical phrase. By no manipulation in this way can we make "externality" pass over into "internality" or mind, though we may perhaps look upon the latter as the *agent which focalises* externality, provided we interpret our terms properly.

Proceeding to Prof. Pringle-Pattison's criticisms, we saw that one mistake lay in the misinterpretation of the word "laws". We cannot suppose that in Nature there existed laws and individuals as separate entities, and that these laws were then imposed on the individuals. By a natural law we can only mean the description of certain modes of behaviour. Consequently the evolution of law is nothing but the modification of behaviour, a matter of everyday occurrence. Occasionally a species becomes relatively fixed, in which case "the law" has evolved into a stable state. Inorganic matter may be regarded as providing extreme

examples of such fixed species. No doubt we must postulate that even in the beginning the behaviour of each monad conformed to very general laws, though the behaviour of each would contain unique characteristics; but that is no reason why behaviour should not be modified, with the corresponding modification of descriptive laws. In short, no one wishes to deny the subsistence of laws, but merely to assert that laws may, and do, change. We do not start with fixed species. They are the result of long periods of development. Consequently there is no difficulty in supposing that the laws of inorganic matter have arrived at their present form after a lengthy process of evolution.

Finally there remains the question of the bare monad. This brings us very close to the limits of pluralism, and hence exhibits its incompleteness. For while there seems to be no inherent contradiction in the notion of a bare monad, it leaves us unsatisfied, since it directly involves the problem of the interaction of monads. We seek further for the concrete ground of this interaction, and are thus led to realise that some all-pervading principle, if it may be so called, is necessary to explain the unity of what in another aspect is a manifest plurality. There we must leave the matter for the present. If we are to achieve anything we must start from the given plurality of individuals, and this pluralism will carry us far. As we have seen, the difficulties supposed to lie in its way are by no means so real as they seem. But when the pluralistic hypothesis has done its utmost, we are bound to supplement it by a further principle, wherein we take account of that bond, whatever it may be, which makes reality a Universe.

V.—DISCUSSIONS.

MR. JOACHIM'S CRITICISM OF 'CORRESPONDENCE'.

ALTHOUGH signs are not wanting that the tide has already begun to turn a little, the theory of correspondence has suffered in recent times a pretty general obloquy. Even those who were at heart its friends have frequently seen fit to abandon the word at least, by identifying it with some peculiarly obnoxious form of theory which they could then join in abusing; while the reigning schools have for once agreed with one another, and unanimously ruled it out of court as no longer a philosophically respectable point of view. This persuasion renders it more or less difficult for one who is inclined to be sympathetic toward the notion. Criticism he might meet, or try to meet; but the assumption that a thing is so obviously not so that it no longer needs even to be criticised, leaves him rather at a loss. The more usual procedure has for some time been to pass by the issue as one that now by common consent may be regarded as disposed of, with a casual reference, perhaps, as if it were decisive, to one difficulty in particular that correspondence has to meet—the difficulty of showing how we can obtain assurance that reality corresponds to our ideas of it when reality by definition lies outside immediate experience as such. That an important problem exists here I have no wish to deny; and it is one to which the theory will need to find an answer. But unless it takes the form of self-contradiction—and this is not asserted—the existence of a difficulty is hardly a final refutation of a philosophic claim, or else where is the philosophy that would be safe? and the disposition to accept it as final is sufficiently met by what the logic books have to say about the 'fallacy of objections'.

It does happen exceptionally, however, that the notion of correspondence is treated to a more serious examination; and what I shall undertake to do here is to consider one such critical attack in some detail. It is to be understood that I am not attempting a positive defence of the doctrine. But it may be taken, I suppose, as an elementary principle of debate that before a proposition can either be proved or disproved effectively, it needs to be understood; and it is therefore worth asking to what extent criticisms do actually touch the real point at issue. This need becomes particularly manifest in connexion with the attack I propose to examine. Mr. Joachim, with commendable frankness, grants before he is through that his own alternative programme has its troubles, which even, here,

take the form of self-contradiction. More than this, the nature of the chief difficulty is one that springs from the necessity after all of recognising an element of 'correspondence' in the situation.[1] And the only reason given for the rather desperate expedient of subordinating the relative truth of a formula which, it is confessed, is, from the human point of view, the natural description of the facts, to one which, confessedly also, contradicts itself, is the supposed prior proof that the correspondence formula is incapable of being thought intelligibly. In such a case it is well to make sure that no possibilities have been overlooked.

What then is the essence of the 'correspondence theory'? As I shall interpret it, it presupposes two main theses. The first is, that in 'truth' there is always a duality involved; on the one hand 'ideas,' and on the other a reality which is existentially different from the ideas, and known only through them as a medium. And in the second place, it holds that if we are to know the nature of this reality 'truly,' it must in so far correspond to our ideas of it. If for example I know my neighbour's motives for an act of his, the motives as they exist as causal facts in his own consciousness, and my knowledge of these motives, are existentially two, not one; and also the true character of the motives must somehow be reproduced or duplicated in my ideas about them. The details of such a doctrine are indeed capable of a fuller analysis; but for my present purpose I can take the above account as practically sufficient. What then are the difficulties that to Mr. Joachim render it untenable?

Mr. Joachim starts out by attempting to make the notion of correspondence more precise; and on the result at which he arrives here his subsequent argument wholly depends. Briefly the result is, that correspondence is unintelligible except as it involves a point to point relationship of elements in two systems which exemplify the same idea or 'purpose'. Thus if we compare the map of a country with the country which it represents, each element on the map corresponds to an actual locality. This necessitates, first, a system whose underlying unity of plan or structure is capable of being repeated in different materials, and, second, the existence of functional parts which bear in the two expressions of this plan the same relationship to the whole to which they belong.[2]

As a preliminary to inquiring whether this is an exhaustive account of correspondence, it will be necessary to consider a certain ambiguity in Mr. Joachim's discussion which he apparently has not attempted to remove. Mr. Joachim speaks on occasion of two forms of correspondence here—between the wholes as such, and between the corresponding parts of the wholes; and the definitions in the two cases are not identical. Correspondence when attributed to wholes is simply a name for their identity of purpose; applied to the parts, it means that two elements perform with reference to this purpose the same *function*.[3] It does not follow that there

[1] *Nature of Truth*, pp. 175 *seq.* [2] P. 12. [3] P. 10.

must be a contradiction here. But one definition is supposedly more ultimate than the other; which are we to take as our starting-point in theory?

Now it seems to me plausible to hold that, *if we are to make system essential* to the notion of correspondence, the idea of function is the fundamental one; and that wholes may be said to correspond only *because* they already have corresponding parts. In order that the parts may correspond functionally there must, it is true, be a plan; but it is in the first instance the parts which correspond by reason of their similar relations to this plan, rather than the wholes because of their identity of structure. For otherwise it might be asked why correspondence should hold between two identical expressions of purpose, any more than between two simple elements—why the same *qualitative* content might not give rise to it as well as the same teleological structure. Now what I am going on to argue is precisely this, that while two things may resemble one another—and Mr. Joachim uses correspondence and resemblance interchangeably—because they show the same purpose, they may equally well do it on account of an identity of character other than teleological; and resemblance is all that the 'correspondence theory' requires. If therefore the word 'correspondence' implies something in addition, it is well to get the ambiguity out of the way before we start. Now I am not sure but that the word *does* tend, perhaps properly so, to suggest a reference to similarity of function. We do not hesitate to speak of a map as corresponding to a geographical area, meaning that the *points* on the map correspond in detail; but do we naturally say that two cases of red, as such, in two objects, 'correspond'? *If* we do not—and only then should we be justified in limiting correspondence to 'system'—it apparently is because the word has as its special connotation that relational character which an element may on occasion have as a part of a whole, which then would in a secondary way justify us in speaking of the wholes themselves as corresponding.

For convenience' sake, however, I shall ignore this refinement of meaning, and make no difference between correspondence and resemblance; and this is justifiable since, as will appear, it is resemblance that really is relevant to the problem of truth. And now of course the important point is not that correspondence can be illustrated by such examples as Mr. Joachim chooses, but that these are the *only* kind of things that can be said to correspond. But Mr. Joachim's own illustrations, though some more obviously than others, will suggest a further possibility. Suppose we take the instance of a portrait. Not only do the features correspond in their relative significance for the face as a whole, but, in a measure, they also correspond, or resemble one another, as parts. It may be true that, from the standpoint of the painter's purpose and the artistic 'truth' of the picture, this literal resemblance is relatively unimportant; that is immaterial so long as there is *any*

standpoint from which the claim possesses meaning. And that it has such a meaning is, I think, quite clear. The popular and unenlightened judgment about pictures may not be aesthetically adequate, but it is perfectly easy to understand; and the disposition of the public to judge the truth of a portrait in terms of literal reproduction applies just as well to the separate parts as to the parts in their organic relation to the whole. It asserts, that is, that these correspond not merely or primarily in the sense that they add their contribution to the significance of an artistic whole, but in their own qualitative characters as well. And for this sort of correspondence it is not even necessary that things belong to wholes at all. Correspondence, then, means simply similarity of character. A portrait corresponds to the original when it *looks like* the original, the nose corresponds when it *looks like* the real nose; and it would still have a resemblance even if it were taken out of the picture and stood by itself. Even a single spot of colour 'corresponds' to another spot when they make the same impression on the sense organs. Naturally if we select examples where the similarity is in terms of relationship to a whole, and not of intrinsic qualitative character, we may succeed in obscuring this sort of judgment. "A simple point," Mr. Joachim writes, "on the surface of a mirror, *qua* simple point, can suggest nothing other than itself. . . . As a point on the surface, *i.e.*, as one in a scheme of related points, it may under certain conditions 'suggest,' 'resemble,' 'correspond to,' a different point in another system of related points whose structural scheme is the same as that of the scheme in the mirror."[1] Now a point, I suppose, is definable only through its relationships to other points; and so here it is true that we cannot have correspondence except as wholes are involved. But colour *has* a meaning by itself. And if we were to say that a patch of colour can suggest, *resemble*, or correspond to another patch only as they both enter into a similar scheme of related colours, we should at least be pronouncing no self-evident judgment, but one that would need to be defended against a pretty general belief to the contrary. A colour may be incapable of *existing* except as it is the colour *of* something; but in order to say that it resembles another colour we not only can, but do, ignore its connexions, with their concomitant properties, and compare just the 'simple' colours by themselves.

And the point is emphasised, I should say, when we turn again to the correspondence between 'wholes' of Mr. Joachim's illustrations. Why is a resemblance judged to exist between a portrait and its original?—because the two possess something in common, or because of the *specific nature* of this something? I should answer without hesitation that the former is the case. If we are allowed to say that resemblance consists in the possession of *any* common character, we not only can explain the instance in hand—where the identity is that of plan or purpose,—but also the innumerable other cases of resemblance, since the basis of similarity

[1] P. 11.

can be anything you please. But if, with Mr. Joachim, it is not abstract identity, but only the concrete case of *teleological* identity, which constitutes resemblance, a great mass of common judgments are left unaccounted for, except through a highly forced and artificial exegesis.

How does it happen, then, that Mr. Joachim ignores so obvious a meaning of correspondence as the 'presence of identical characters'. The reason seems to me this, that he insists on approaching the problem on the basis of his own philosophical presuppositions, although the theory which he is criticising starts out by repudiating these; and by thus ignoring the primary matter in dispute, he naturally fails to make sense of the opposing doctrine. And this in particular affects his conception of the part that the 'mind' is supposed to play in the theory, and so causes his discussion of the point of chief significance—the relationship of correspondence to *knowledge*—to be not only extraordinarily vague, but almost totally irrelevant.

I may start first with Mr. Joachim's more explicit argument against the notion of resemblance as I am using it. The argument is, that a simple entity cannot *as such*, and considered *as such*, be related to anything. So far as A and B are related, they are *eo ipso* interdependent features of something other than either of them singly; and on the other hand, if A and B really are each absolutely simple and independent, it is nonsense to say that they also are really related.[1] Now of course, if, when we talk of the resemblance of simple elements, we mean that a simple element is one that has no relationships, it would naturally follow that they cannot be related even by way of correspondence. It is a self-evident proposition that things cannot have relations and be without them at the same time. But I am not aware that anyone wants to maintain simplicity in this sense. Doubtless there is a question of logic here that deserves the attention of the philosopher; but for the present purpose we can afford to stop somewhat short of fundamental theory. I am quite ready to admit both that any element must, in the real world, be part of a larger context, and that it cannot become a part of our *thought* world without getting entangled in a network of relations to other content. But I cannot see that this settles the immediate issue, which is, simply, whether, in order to give meaning to the notion of resemblance as a particular notion, you have to take account of a totality of conditions, interpreted as a teleological whole. Of course I cannot pronounce the judgment that A resembles B without getting a 'knowledge system'—'A's resemblance to B'. But this is not enough for Mr. Joachim; what he wants is some sort of 'concrete universal' to which A and B alike must be recognised as belonging *before* they can be judged to be similar. And I do not find, empirically, a need for anything of the sort. I do not mean that we do not, in our developed life at least, always in the act of comparing bring to bear a mental back-

[1] Pp. 11-12.

ground. But because I use my knowledge of Latin to translate a line of Vergil, it does not follow that the meaning of the sentence is a compendium of Latin grammar. It may be said indeed that the 'apperceptive mass' works not only to provide the conditions for the discovery of meaning, but also to interpret the significance of the thing discovered; and that in this last way it is vitally implicated in the nature of correspondence itself. But the 'significance' of correspondence is quite different from, and already presupposes, the fact and nature of correspondence; whereas the significance of the 'facts which correspond,' which *is* a part of the mental background, serves again as a condition for recognising correspondence, and does not constitute its nature as such. Also it is true that both A and B are parts of a real universe, and that I do not know the whole truth about either till I know the universe to which they belong; but this too is beside the point. I am not trying to know *all about* A and B, but only to give an intelligible sense to the statement that A and B are in certain assignable respects similar; and if I could not tell what this meant till I knew everything, I should naturally be unable to say at all. The question is not, What is the complete nature of reality? but, What do I intend when I use the particular word 'resemblance'?

And this last remark suggests one source of Mr. Joachim's difficulty with the notion of correspondence; it is due to the conception of truth which he always presupposes. The point comes very plainly to the surface in his judgment that, whatever the relative significance it may turn out to have, correspondence is at any rate a subordinate factor in the genuine definition of truth as 'coherence'.[1] Thus the truth of a portrait, we are told, is only very inadequately attained by the mere faithful copyist; what genuinely constitutes its truth is in terms of fulness of meaning, or inner significance and suggestiveness. Now it seems to me very evident that we are in danger here of falling into a fatal confusion of terms. Mr. Joachim clearly wants truth to be identified with *reality*. The truth of the portrait is the 'true' character of the person portrayed; and so the question, What is truth? comes to this: What is the most adequate possible account of the reality concerned?—in the end, that is, of the universe. But this is a problem quite other than the one which furnishes a starting-point for the 'correspondence theory'. When the advocate of this asks, What is truth? he means, not, What is the concrete nature of that which is 'true,' or real? but, What do we mean by its *being true?* And he answers, as indeed Mr. Joachim at a later point concedes that he has a right to answer, that 'being true' is not being real, or actual, or existent, but, in the human sense, it means the passing of a judgment, or the reference of an idea, that is adequate to the reality intended. But now it becomes possible again to distinguish two questions: Does my present judgment cover *all* the truth about the reality? (which no single judgment, of course

[1] P. 16.

pretends to do or can do), and, Does the limited portion of character or content in which alone the judgment is interested actually belong to the real world to which it is assigned? And this last is the specific problem which gives rise to the emphasis on 'correspondence'; and in the light of this problem it is correspondence, not coherence, that is fundamental. So in the portrait illustration, and even where full artistic 'truth' is concerned, the relevant question is not, What is the true character of the sitter? but, Does the portrait really 'represent' his inner character—assuming this to be already known or discoverable—and not stop with mere externalities? The finer shades of character, however, are still things that take physical form in the person portrayed, to be represented in determinate ways on the canvas. Now I do not say that Mr. Joachim's conception of 'truth' may not be infinitely higher and more noble than the other. I only say that if you set out to understand another man, you have got to take words as he means them, in the context which he has in mind; and you ought not to be surprised if, having substituted for this another set of concepts which leave out or deny what for him is the thing in which he happens to be interested, you fail then to make sense of his claims. And in particular, to return to my starting-point, it now appears why, when we define truth as the system of reality itself, we are unable to understand 'the truth of correspondence' except in terms of system.

There is one variant on the last-mentioned interpretation of Mr. Joachim's meaning which should perhaps be noted. It is, namely, this, that two things cannot be called similar unless along with the element of identical character there is also something to distinguish them, and so that the point of similarity has always to be abstracted from a concreter whole. But to this the reply has already been indicated. If the point were that a simple element cannot *exist* as such, apart from a context, we should have a pertinent objection. But we are asking, instead, what aspect of reality it is that gives meaning to 'resemblance'; and then the relevant thing is not the context—though a context needs to be presupposed—but the identity of character itself as it holds of two cases of existent fact which for *this* reason, and not because of the attendant differences, are noted as similar. That the recognition of similarity always involves a process of abstraction, is no hindrance to the fact that it is on the particular elements abstracted, not the wholes *from* which they are abstracted, that similarity is based. And in any case there is nothing here to make it in the least necessary that the context should, in addition, possess also an identity of *teleological* structure.

So far we have, following Mr. Joachim, talked about correspondence without any reference at all to 'knowledge'. Correspondence as such is simply a particular sort of relationship in a world of relationships, no more to be identified with truth than are relationships of quantity or causality. The existence of a resem-

blance between a portrait and the original does not make 'truth' in the epistemological sense; the truth is *that* the two resemble. This, as Mr. Joachim recognises, somehow brings the 'mind' into the situation. And here, it is to be noticed, we have a further and sounder reason why correspondence, as a 'theory of truth,' cannot be reduced to mere similarity between simple entities, or, for that matter, between two 'systems'. The bare existence of similar facts, even though one of these be an idea or a mind, is not sufficient to constitute truth. It is not enough that somewhere in the universe there should happen to be an object resembling my idea; it must be the particular object that I mean. Accordingly correspondence, as a knowledge term, needs to convey, over and above the notion of resemblance, some account of the 'mental' factor; Mr. Joachim is justified in demanding this. And it is not enough to put this account in terms of a resemblance between two elements that are present to a contemplative consciousness as a third factor.[1] The only sense of truth that the correspondence theory recognises is the truth of an idea present to the mind of the person judging. The 'truth' of the portrait does not become an epistemological fact simply through adding to the situation the mind of a critic or observer; truth here means only 'completeness' or 'adequacy' of correspondence. The 'epistemological' truth is, again, *that* the critic's judgment is true of the total fact 'portrait in relation to original'; and so an internal function of mind is necessarily involved.

And this difference both in the problem, and in the sense attached to the terms used in common, render it unnecessary to follow Mr. Joachim's discussion in detail, since the particular interpretations to which he enters objections are ones that no present-day form of the correspondence theory that I am acquainted with would think for a moment of adopting. I shall content myself, therefore, with pointing out the main presupposition which, because it is his own, he wrongly assumes that his opponents also must intend to hold to; and then, without stopping further to justify it, state more exactly what it is that the theory of correspondence *does* imply.

And the original source of Mr. Joachim's difficulty is this, that he calmly sets aside the fundamental notion of a reality *beyond* experience to which the mental factor corresponds, and tries to restate the hypothesis in terms of a correspondence of factors *within* experience. Now I grant again that a distinction between experience, and extra-experiential existences, and the definition of knowledge in terms of a transitive or mediate way of getting at the latter, may prove untenable; but the *conception* is certainly, as a conception, not so totally devoid of sense that an opponent cannot even get it in mind sufficiently to criticise it. But what then are we to say of an attempt to show its intrinsic unreasonableness by first replacing it with the very thing it wants chiefly to repudiate—an immanent or experiential situation—and then arguing that for *this* situation correspondence retains no intelligible meaning? But this is what

[1] *Cf.* pp. 12-13.

Mr. Joachim does. For the relation between ideas which are functions of human experience, and a real object conceived as having an existence, but as never entering bodily into the experience that knows it, he substitutes a 'whole of experience at the level of feeling,' and a 'whole of experience at the level of reflective thought'.[1] I quite agree that an attempt to state correspondence in this way is hopelessly obscure and doomed to failure; but just why should it be considered fatal to a theory for which the identification of the 'real' or 'objective' world with 'vague unmediated feeling' is absolutely the last thing that it would consent to consider?

What then is the part that the mind plays in correspondence? Let me state again briefly what I conceive the theory to maintain. First, it presupposes that real things exist, having certain definite characteristics, or a determinate nature. Second, it supposes that this nature or essence of the object can be *thought;* that more or less adequate ideas of what it is like can also form a part of our mental furniture. This is the first way in which the 'mind' enters in—as a fugitive 'ideal' content professing to grasp descriptively the objective characteristics of a real world. Between the two sets of facts—objects and ideas—there is, so far as we know empirically, no experienced connexion; it is the very point of the theory that they do not exist together *for* a mind—in a unity of experience, that is, constituting a concrete conscious whole. For, thirdly, the part which the mind plays, in a further and more ultimate sense, is, not to know itself, or its ideas even, along with the object in a single whole of experience into which both enter bodily; it is to *refer* its ideas—the characteristics, that is, that constitute the ideal or thought content—*to* the object, in a unique relationship which one does not understand by substituting for it another relationship of compresence, but only by looking at the specific act of knowing, and recognising it for what it claims to be. Correspondence, accordingly, is not a relation which we are conscious of when we 'know the object'; we are not thinking then about our ideas *as* similar, or indeed *about* our ideas at all, but only about the object as having a certain ideal character. But later on we may note that our ideas actually were involved at the time; and then first, by making a comparison in a new act of knowledge which now has as its object the thing *plus* the former idea of it, we discover between the two the same relationship of correspondence that we may equally get in other cases that do not involve ideas at all. Here indeed at last the *ideas* of the two—of object and thought of object—are present in a unity of consciousness, or otherwise we could not compare them. But the 'mind' which now makes the comparison, with its act of reference, and the actual things which are compared *in idea* (not in their actual existence, which is still extra-experiential), are no more elements in a single experience than before. I shall make no further effort here to defend this analysis. I only claim that it is perfectly intelligible in itself, and that it avoids all the ambiguities of Mr. Joachim's account.

[1] P. 26.

A. K. ROGERS.

THE STATE AND THE INDIVIDUAL.

MR. BROAD writes in the July MIND, p. 370, (1) that my contention that the will of any particular citizen is abstract and fragmentary compared with the will of his state, is simply unintelligible to him; (2) that it seems to him inconsistent with my other view, which he approves, that it is absurd to judge a state by the same moral criterion as a private citizen, since it has different tasks and acts in a different medium; and (3) he makes an assertion about the means by which all actual states are worked, *viz.*, "by inertia, fear, and various tribal illusions on the part of the governed, and ambition, interest, and occasionally a genuine desire for the general welfare on the part of the governing classes".

May I try to explain?

1. The starting-point of my view on this point, which I derived mainly from Plato's *Republic*, is the insight that in a social community all the private minds, especially those which serve as organs for public functions, supplement each other, the same needs and capacities being present in each, but developed in very various proportions. Thus a man who is not an artist feels up to a certain point with the artists, and if he wants to do or know or enjoy anything in the way of art, he goes to the artists to teach him how to will it. You cannot will a thing in which you are ignorant and untrained. So about health, education, and all public interests. Minds borrow from one another what they lack in order to be able to will effectively. They borrow both knowledge and spirit. Most of us at home to-day are doing our work, however trivial, better and more resolutely, by catching something of the spirit of our army abroad.

It is difficult, just for this reason, to say what is a man's private will. But most theorists would agree that he is already willing when he begins to "take steps" to carry out some wish or plan. Now in everything but his own special vocation, the moment he begins to "take steps"—in order to buy a coat, to educate his son, to spray his potatoes—he appeals to some trade or profession or public organ to teach him how to will completely what he has begun to will in the abstract. (I have grown some Dutch beans to use for food; I did not know exactly how to use them, and appealed to the Royal Horticultural Society; and this morning I have their leaflets. Now my volition is complete and concrete.) Every mind and will is in this way, I urge, supplemented, reinforced, and controlled by the co-operation of minds and wills which

is the community. If one is a rebel, it makes no difference. The rebel draws his matter and suggestion from the co-operating minds.

2. Now, what is the will of the state? You can distinguish it in principle from the will of private persons, and of the social community, though of course it cannot exist apart from them. It consists of these wills in a certain aspect and attitude, that in which they co-operate by certain formal processes in dealing with public or general interests.

The difference lies, surely, then, in its object and method; and with these, though the will is still the will of persons, its attitude and the conditions of its rightness, are profoundly modified. We are now not simply living our own lives with the help, however essential, of others. We are prescribing the conditions under which multitudes are to live, so that we may *all* shape our own lives for the best. In both cases the best life is the end; but when your object is not merely to live your own life, but to lay down general conditions under which others are to live theirs, you must act very differently. Every one knows this, who has to make general arrangements to facilitate classes of actions. A simple case is that you must not enforce your own religion; you must give all their chance, though you may think that some are sending their votaries to hell. To follow out your private conscience here is the Inquisition straight away, or perhaps civil war. We have experience of this problem in India.

Well, then, the conditions of right willing are much modified when private wills become the will of the state. But the relation asserted in (1) remains. I am resolved that justice shall be done to women about their votes, and to France about Alsace. But I cannot will either concretely, because I am not master of the details. I could not draft either the bill or the treaty. I must learn my own will, in the concrete, from those whose business it is to master these matters. But will they teach me right? Of course I may be taken in. The main principle, however, is one with what I said at starting. I can learn, from contact and experience, that I may, or may not, safely take minds of a certain type as trustworthy for me, and if persons of a certain sort say the bill or the peace is just, I shall be satisfied. 'But I ought to inform myself'? Yes, up to a point, for obviously I cannot know and judge of everything. But informing myself is only possible on this same principle. I must know what minds I can trust as reliable in fact and in criticism, and this can only come from experience of co-operation with them.

3. I am speaking sincerely and not ironically when I say that I feel it a very serious difficulty in arguing these semi-philosophical questions, that one does not know what experience the other side has at command. If I believed that Mr. Broad had before him the same experience and information which I have, I should either not attempt to argue at all, or should argue quite differently, by weighing and analysing points in our common information. And

obviously, the language I am using may be retorted from the other side. The only thing to do, as matters stand, seems to me to be to compare our information. But the pages of MIND are perhaps hardly the right place for discussion of that kind. I will ask permission, however, to conclude with a somewhat prolonged quotation, illustrative of the type of experience in harmony with which my attitude is formed. I preface it with two observations. First, I accept it as a typical study of the relation between the private and the public will, and of the forces by which "an actual state" is mainly worked. Secondly, in quantity, it is the merest drop in the ocean. Anyone familiar with public affairs, whether local or national, may study and encounter similar experiences on all sides of life from morning till night his whole life long. The quotation is as follows (Carter, *Control of the Drink Trade*, Longmans, 1918, p. 225 ff.): "The extent to which detailed and intimate control can be carried, under the direct administration of the State, acting in conjunction with a local committee, is one of the clearest advantages [of State Purchase and Direct Control, as at Gretna Green and Carlisle]. The numerous examples given above of control measures—applying either generally throughout the district, or to a few houses to meet special local conditions—demonstrate the value of calling in the aid and service of representative citizens.

"From the mere fact that the State assumes direct responsibility for the control of the traffic, it follows automatically that criticism becomes far keener, and that a much higher standard is demanded. The representatives of local authorities find themselves able to secure reforms which they may have long desired, but were powerless to effect. The whole locality becomes actively interested in the problem of eradicating the drunkenness within its borders; and this interest is in itself a long step towards the removal of the reproach." Such a description of fact as this seems to me absolutely incompatible with Mr. Broad's statement quoted above.

BERNARD BOSANQUET.

In the July MIND, p. 270, footnote, Canon Rashdall challenges me "to indicate where Green has recognised that the Absolute is Will". His statement in the text is "Green reduces God to a purely knowing consciousness. He thinks of God in terms of Mind but never of Will." In the footnote he changes the term God to the Absolute. I do not think Green habitually employs this term; but a passage referring to God seems to meet Canon Rashdall's challenge. I cite Prolegomena, section 302, end: "He (man) must think of the infinite spirit as better than the best he can himself attain to, but (just for that reason), as having an essential community with his own best. And, as his own best rests upon a self-devoted will, so it must be as a will, good not under the limitation of opposing tendencies but in some more excellent though not by us positively conceivable way, that he will set before himself

the infinite spirit." The passage is quoted at length in Nettleship's biography, p. 220, and followed by very just observations on the reason of Green's reserve in the Prolegomena as contrasted with the confidence of the religious addresses which express the doctrine that God is love on nearly every page. One is tempted to think that Canon Rashdall can hardly be acquainted with these latter, the little volume of which is to some of us among our most precious possessions. Of course, if he is asking for Schopenhauer's doctrine, he will not find it in Green. But its absence is very far from justifying such language as that about "a purely knowing consciousness".

BERNARD BOSANQUET.

THE TEST OF EXPERIENCE.

It is seldom that the opportunity comes to a philosopher to test the theories that he has been in the habit of teaching in any crucial or decisive fashion. Yet in this present cataclysm of war many philosophers must have had just this opportunity with regard to the virtue of courage. How have their theories stood the test? Have they, like the writer, found occasion to modify or withdraw the confident assertions of the lecture-room? To the writer it seems clearly proved by his experience in action that Aristotle's account of courage is very much nearer the truth than it was generally thought to be by himself and others, discussing it with their pupils and among themselves at Oxford in the days before the war.

Courage to Aristotle is a moral virtue, *i.e.*, an acquired strength of character, attained by the exercise of a twofold control in which also it manifests itself. The control is twofold because it is partly internal, over self, and partly external, over things; and the self which is controlled is of course the emotional self. These emotions, it is implied, are not in themselves either good or bad. They are the material of virtue as of vice, and are thus required in their due measure as constituents of the virtuous act. Above or below the due measure they go to make the act and character which exhibit them bad. Courage is thus a mastery of dangerous situations made possible by a mastery of the emotions which in the normal man dangerous situations arouse.

Now the emotions aroused by danger are, according to Aristotle, two: fear and an opposite which we take leave to call 'cheer'. Danger, so far as nothing can be done to avert or mitigate it, excites pure fear; but so far as there is promise of personal effort availing something, cheer rises to meet it. Where effort plainly avails nothing, as with men left to drown in the open sea, it is something different from courage that is demanded, since there is no glimmer of ground for cheer. Experience of any particular type of danger teaches men that there are many ways of escape to the resourceful. Hence, for example, a bad storm at sea, which overwhelms a landsman with pure fear, may be the occasion to the sailor of nothing more than ordinary courage. Cheer, as well as fear, may be allowed to exceed its measure, with bad results on conduct and character. For foolhardiness is a vice as truly as cowardice, though men are less prone to it, and its cause and manifestation is excessive indulgence in the emotion of cheer.

Such, stated briefly, and with some of the niceties of exposition slightly blurred, is Aristotle's account of the virtue of courage. The feature to which exception was generally taken was this odd emotion, opposed to fear, which we have called 'cheer'. It was commonly asserted that no such emotion exists, and suggested that Aristotle invented it for the sake of symmetry. But it was a curious symmetry; for a pair of opposed emotions is not a general feature of the Aristotelian analysis of the virtues of character.

Having myself been guilty in the past of just such criticisms, I think it both honest and useful publicly to avow that experience of active service leads me to the firm conviction that they are thoroughly erroneous. The emotion of cheer—I will take a better name if some one will give me one—is a real thing, not an invention of the Schools; an important fact of human nature, without which the behaviour of our citizen armies in the highly dangerous situations which prevail at this time in Flanders and elsewhere would be very much less admirable than it is. Like any other emotion it is seen most clearly in the young. In my Company I had a youth of 19 or 20, a Lance-Corporal in charge of a Lewis gun. He was a very quiet boy, always particularly smart in his turn-out and very correct in his behaviour, silent and sober and in a general way anything rather than a dare-devil. For a long time, living as we did in a quiet part of the line, we never found him out. Suddenly things became hotter, and he was transformed. As soon as the enemy put down a heavy barrage on our trench he was a different man. He bubbled with energy and impudence. Keeping up a sustained flow of vigorous language he stood on the fire-step, head and shoulders above the parapet, popping away with his gun, having to all appearance the 'time of his life'. I saw him in action many times after that before he was killed, and he was always the same. Whether in attack or defence, danger invigorated and transfigured him. It was not fear he had to conquer and control, but the exhilaration produced by the sight of such splendid opportunities for the use of his darling weapon.

This is only one instance; and it is difficult to describe it on paper so that it will carry the same conviction to others as to myself. Of course I could quote other instances, but none so clear. I have even myself, in a measure, felt the same invigoration, especially when advancing or attacking. Nearly every one I have met who has been in an even moderately successful attack has told me that he felt a great excitement, and even a kind of enjoyment, which happily blinded him to the suffering and destruction surrounding him. We attacked once, short of food and after a sleepless night, at 7.30 a.m. on a November morning. Things went well; and in the middle another officer shouted to me, 'Who says the men want breakfast when there is fun like this about?' In all these cases, I think, we may trace the operation of that powerful and most blessed emotion, rising to oppose fear in the face of danger, cheer.

Let us therefore make amends to Aristotle for a wrong done, and

admit, however tardily, the justice of his analysis. Of these two, fear and cheer, duly measured and mastered by will, courage is made, a strength of character fortunately not rare in British soldiers, in whom the natural force of cheer is strong. Probably, at first or second hand, Aristotle had more experience of war than we have had, till lately, in our day.

Here is a Postscript. I have met in England quite a number of good people who appear to think that the normal man enjoys service at the front, just as I have met others in whose eyes the life is one of unrelieved hardship and misery. Those who fall into the latter error may be to some extent encouraged by the analysis attempted above. The former I would recommend, following Aristotle's hint, to work the matter out for themselves. Let them remember that a man takes with him into the presence of the enemy his individual stock of fearfulness and cheerfulness, with whatever force of will he can command. Let them calculate what proportion of his time he spends in serious danger, and in what proportion of that danger all a man's skill and strength can avail him anything at all. They will then be in a position to reckon the chances of cheer overbalancing fear, and the strain upon the soldier's strength of will. Against rifle bullets a man may feel that strength and skill avail something; but against shells it is only too plain that they avail nothing at all. That is what makes modern warfare so exacting in its demands upon human nature.

J. L. Stocks.

VI.—CRITICAL NOTICES.

Traité de Logique. Par E. Goblot, Correspondant de l'Institut. Professeur d'histoire de la Philosophie et des Sciences à l'Université de Lyon. Préface de M. Boutroux. Paris: Armand Colin, 1918. Pp. xxiii, 412. Price 8 fr. + 20 per cent.

The central problem of this book inevitably recalls Kant's problem of the possibility of *a priori* synthetic judgments in Mathematics. But Kant, M. Goblot remarks, did not question the value of the traditional Logic as the main instrument of reasoning. He assumed that the essence of reasoning is to bring out what is implicitly contained in the premisses on which the reasoning is based; and was in consequence content to show that among the premisses of Mathematics there were *a priori* synthetic propositions. It is not our purpose here to ask whether this is a correct interpretation of Kant. M. Goblot uses it merely as an illustration. It is enough to note that M. Goblot is not satisfied with Kant's answer as he understands it. M. Goblot insists that even if a science contains synthetic propositions among its premisses, the fundamental problem still remains, *viz.*, how is it possible, on the traditional theories of reasoning, for a pure science to contain anything but its premisses? That the conclusion of a proof in pure science does arrive at a new result, is, he insists, clear; that the new result necessarily follows from the premisses, is equally clear: how then is the newness compatible with the necessity?

M. Goblot's solution of this problem is, says M. Boutroux, "une doctrine lucide, cohérente, complète, qui marquera un moment dans le progrès de la logique"; and it is worked out in detail, in its bearings on all the problems of Logic.

The solution is in essence this, that both the newness and the necessity spring from the intellect. To the objection that, if intellect adds anything to the premisses, then the conclusion cannot be true, M. Goblot replies by relating truth, not to objects existing independently of the intellect, but to intellect itself. "Les raisons ne sont autre chose que des idées capables de convaincre, c'est-à-dire de contraindre à admettre d'autres idées, et cette force de la preuve ne se conçoit pas en dehors d'un esprit en qui elle réside et sur qui elle agit, puisque la preuve, l'assertion prouvée et la détermination de l'assertion prouvée par la preuve sont des opérations de l'intelligence" (p. 20). Since propositions or judg-

ments have no being apart from the act of judging, hence all the properties which judgments may have must be connected with the act of judging. Inferential connexions are, on this view, essentially connexions for intellect. At the same time they are not extrinsic to the propositions themselves. They are not, however, completely intrinsic, in the sense that the conclusion implied by a set of premisses is contained in the premisses. Precisely in what sense inferential connexions between propositions are intrinsic to the propositions themselves and in what sense they are not—in what sense a conclusion is something new—is brought out by M. Goblot's account of the nature of reasoning.

The author sums up his view in four propositions, of which we shall deal only with the first three. "(1) que le raisonnement déductif doit sa fécondité à des opérations constructives; (2) qu'il doit sa nécessité à ce que toutes ces opérations sont exécutées en vertu de règles; (3) que ces règles ne sont pas les règles de la logique, mais les propositions antérieurement admises; (4) que le rôle de syllogisme se borne à l'application de ces règles au cas considéré" (xxi.). Elsewhere, he sums up his account in the statement that deductive reasoning is a construction of the conclusion by means of the premisses ("opération logique") followed by a "constatation logique" of the constructed result. This account finds its best examples in Geometry and Algebra. In intuitive Euclidean Geometry, constructions are a preliminary to almost every proof. For M. Goblot they are more: they are constitutive and essential elements in the proof itself. He instances the proposition that the sum of the angles of a triangle is equal to two right angles; where the proof, he says, consists essentially in constructing the sum of the angles, and then in seeing, by a "constatation logique," that this sum is two right angles. So in Algebra, the material of the science is algebraic forms. Proof consists in constructing new forms, starting with given forms. "La démonstration consiste à *construire* la nouvelle forme en partant de la première. . . . L'opération constructive fait apparaitre un résultat nouveau" (268-269).

Constructive operations are operations carried out mentally. The operations whose mental performance makes them logical are essentially "external actions, *e.g.*, movements". As examples are cited the groupings of small stones in primitive arithmetic, operations of natural agents, such as the raising of a column of mercury by pressure of a gas, operations of intelligent agents, as when the motives of a crime are being understood, and reasonings, *e.g.*, in the case of the interpretation of a philosopher's views. Mental operations are thus "toujours des représentations d'actions *objectives*, exécutables soit dans le monde réel, soit dans un monde abstraitement simplifié, ou même tout à fait fictif, mais toujours distinctes des opérations de l'esprit qui se les représente" (273-274).

The result of the construction is new, M. Goblot insists. It is necessary because it has been constructed according to rules. These rules are (*a*) "les définitions générales et les hypothèses spéciales

qui déterminent la question, c'est-à-dire les conventions que l'esprit a faites avec lui-meme, et par lesquelles il s'est lié," and (*b*) propositions already established, which are primarily indicative, but are transformable into imperatives or rules for the purpose of gaining new results (264).

A word must be said as to what M. Goblot calls "constatation logique". It seems to have two meanings, a narrower and a wider. On page 165 it is introduced by the example of addition in arithmetic, where the various columns are added separately. After the addition, I do not yet know the sum. "Je ne puis la connaître qu'en constatant le résultat par une lecture" (165). Constatation is here distinguished from the perception of necessity. "Certes je ne constate pas, je *juge* que ce résultat est nécessaire, parce que je suis persuadé que j'ai opéré correctement. Mais ce résultat que je sais être nécessaire, je ne le connais que par constatation." This is its narrow meaning. But its wider meaning is given on the same page. "Constatation logique" is essential to reasoning, because without it, thought would be completely discontinuous. Thought might operate, but would not know its own operations; for "agir et connaître sont deux". "Constatation logique" is, in short, identical with reflexion. "L'esprit observe ses propres opérations." It is difficult to see how this can exclude the perception of the necessity of the transition from premisses to constructed result. And indeed it is the wider of the two meanings which M. Goblot uses in his account of reasoning, where he has only two factors, an operation and the constatation of the result obtained (263 ff.).

We have insisted on the two meanings of the word "constatation logique" because they seem to have misled M. Goblot in his account of the construction involved in reasoning. On the narrower meaning, "constater par une lecture," the essence of reasoning must fall elsewhere. Simply to note your result is not to reason. But the important question is, whether the essence of reasoning does not fall within "constatation logique" in its wider sense. An operation, M. Goblot says, is a representation of an objective action, made logical by being performed mentally. But the same objection applies here as to Bradley's account of reasoning as an ideal experiment: It is not the fact that the operation is performed in the mind that makes it logical; but that it is performed with a consciousness of the logical relations involved. It is in this consciousness of the logical necessity involved in the construction that the essence of reasoning lies, rather than in the mere operation itself.

M. Goblot bases his account on the actual nature of reasoning as it is performed, in a series of successive steps. And he considers exclusively the fact that when the final operation is performed, the result arrived at is simply noted. But there is more than this. The result is foreseen. What does this involve? On his own showing, propositions are fundamentally indicative. Science is positive. But as used in construction they are imperatives. Now the important point—and it is insisted on by M. Goblot himself—

is, that their use as imperatives rests on their nature as indicative. You know that the diameter of a circle bisects the circle. Hence if you want to bisect a circle, you can do it by drawing a diameter. The result, however, is necessary, not because of your construction but because of the fact. But the same holds of the operations themselves. M. Goblot sees only two kinds of operations: objective operations, of which we have given examples above, and the mental performance of these operations. But there is a third kind, *viz.*, operations which form part of the subject-matter of some science. Addition is fundamentally neither a physical operation, nor an operation performed mentally, but a numerical operation. The possibility of adding two numbers mentally rests on the fact that numbers are themselves capable of being added. "To get c, add a and b," rests on the proposition that $a + b = c$. So with inference. The bringing together of premisses so as to "construct" therefrom a new result rests on the fact that the premisses themselves imply the result. And the judgment that the conclusion is necessary, which M. Goblot refers to the perception that the mental operation was performed according to a rule, is really dependent on insight into the logical relations of implication holding between the propositions themselves.

M. Goblot can only avoid this criticism by being more thoroughgoing, and treating propositions as fundamentally rules rather than truths. He notes (264) that a generalisation is sterile so long as it is taken simply as a truth, and becomes useful only when taken as a rule directing an operation. But if it is a truth at all, then it has the relations to other propositions which are brought out by operating under its guidance. It is only if propositions are nothing but rules that M. Goblot's account of reasoning holds.

Certain implications of M. Goblot's view may be noted. Accepting as he does the view that reasoning is necessarily hypothetical, and that there is a definite order of priority and posteriority in propositions, he is compelled to conclude that there are indemonstrable propositions, which, however, cannot be true, just because they are indemonstrable. The principle of non-contradiction is one of these, and it is placed by M. Goblot on exactly the same level as the postulates of Euclidean Geometry. It is accepted, because otherwise thought cannot get to work. But that is no reason for holding it true. It is convenient (327-328).

So far we have been dealing with truths of reason, which are all hypothetical. Inductive reasoning is treated in exactly the same way. It consists in starting with observed facts and chosen hypotheses, and then by means of them constructing other facts, which are then verified by observation. Proof would only be complete if all conceivable alternative hypotheses were cut out. The question of fundamental interest, then, is that of the justification for truths of fact. And here M. Goblot's treatment appears to be open to grave difficulties. On the one hand he argues that genuine truths of fact cannot receive justification from other propositions;

otherwise they become truths of reason, and are hypothetical. They must then constrain the intellect in some other way. "Pour que le jugement empirique soit logiquement valable, il faut que les causes qui le déterminent soient purement intellectuelles. . . . Or, si cette cause déterminante purement intellectuelle ne doit pas être cherchée dans un autre jugement, car alors on aurait un jugement de raisonnement, si d'autre part il n'y a pas d'autre faits intellectuelles que les jugements, il faut qu'elle se trouve dans le jugement empirique lui-même. *Un jugement d'expérience est logiquement valable quand il est entièrement et exclusivement déterminé par la représentation qui en fait la matiere*" (46). In short, there must be knowledge by acquaintance. But on the other hand, M. Goblot's view of the social source of truth makes it difficult to see how there can be such knowledge. Man living in society is driven to desire to make judgments which all men will accept; and rationalism is the view that by cutting off all non-intellectual determinants of belief, this object will be attained. This is the fundamental meaning of truth—a belief that all men must accept. But if so, a proposition is true only so far as it is communicable. M. Goblot regards this as involving that sensible qualities cannot be the subject matter of objectively true empirical judgments. "This book is red" he interprets in subjective fashion as meaning that I have the sensation of red; and it is clear that no one else can know whether his sensation is the same as mine. The only empirical judgments he allows as objectively true are judgments of relation, and of these, only the more elementary, *viz.*, judgments of difference, identity, and of quantitative comparison. And he interprets these judgments in subjective manner, as not referring to qualities of objects, but to capacities in me. "This is different from that" means, "I can distinguish between them". If my judgment is to be true, all must have the same experience. But is not this judgment in the same case as the judgment "This is red"? If judgments regarding sensible qualities are subjective for the reason given, then all judgments of comparison are subjective for precisely the same reason; for, if subjective experiences are in question, it is impossible for anyone else to know that the experience which I describe as "finding a difference" or "finding no difference" is the same as the experience he describes in this way. There can be no knowledge by acquaintance, on this view. But for M. Goblot equally, as we have seen, there can be no knowledge of matter of fact unless there is knowledge by acquaintance.

We have necessarily omitted much of the greatest interest in this work: the conception of Logic as the positive science of the pure intellect; the use of virtual judgments in relation to concepts, especially in relation to connotation and denotation; the treatment of finality; and, what is perhaps the best feature of the book, the excellent analyses of the concrete processes of scientific thinking. In all, we should have much to criticise; but more important than any criticism is the fact that M. Goblot makes the critic's path smooth by his careful and lucid treatment of his problems.

We have found most difficulty in M. Goblot's endeavour to show how the results of reasoning apply in the interpretation of given fact. His two main arguments seem to be, first, that the operations in pure reasoning are always the mental performance of some possible objective operation, and secondly, that although the ultimate principles of pure reasoning are merely postulates, yet since these postulates are necessary if we are to think at all, hence no experiences could be given which contradict these postulates. We have no space for a discussion of these points; we merely note that the first seems to imply that we know how a certain physical operation is performed, and hence understand the real already, and is therefore apparently a "hysteron proteron"; and the second seems to contradict M. Goblot's own proof that the indemonstrable propositions are merely postulates.

The book is a valuable and suggestive treatment of the various problems of Logic from an independent standpoint, by one who has had a thoroughly competent scientific training. Written and printed in 1914, its publication was delayed by the outbreak of the war. In the preface M. Boutroux, in a way possible only for a Frenchman and with a charm attainable only by such a master of language as M. Boutroux himself, outlines M. Goblot's problem and discusses with great insight certain possible developments of M. Goblot's views.

LEONARD J. RUSSELL.

Footnotes to Formal Logic. By CHARLES H. RIEBER. Berkeley: University of California Press, 1918. Pp. 177.

THERE are points of interest in this book for all logicians whether formal or not. Its position is somewhere between the traditional logic and the most recent developments. Mr. Rieber has turned the light of his own thinking not only upon the older logic but also upon the anti-Mill movement which began, in England, towards the end of last century, and if he had done the same for the later critical innovations his book would have been still more interesting than it is. Regarded as a defence of the traditional logic against pragmatism it provides no more than a spectacle of good intentions gone astray. A few examples will suffice to show this weak point in Mr. Rieber's results.

One of the recent complaints, for instance, that have been made is that formal logic, through its excessive attention to a certain small group of sentence-forms (the AEIO 'propositions') tends to overlook the difficulty of correctly translating actual statements into these forms. The answer which Mr. Rieber suggests (p. 17) is, first, that there are 'thought-forms' which differ from language-forms, and secondly, that the translation from the latter into the former need not concern the logician because "it is the work of the

grammarian and the philologist". There could hardly be a more complete failure to understand the objection that is made. He is right indeed in saying that pragmatists do not distinguish between thought-forms and language-forms; for if the thought-forms are not to be expressed in language how are they to be expressed? But the essence of our objection is that we do distinguish between the two kinds of language-forms, and we claim (1) that the small selected group is insufficiently representative of thought in general, and (2) that, whether it be so or not, the logician who is content to leave to others the difficulty of translation thereby reduces logic to impotence against the chief sources of error in thought. Certain little slips, no doubt, are possible in drawing formal conclusions from premisses, just as in adding up a row of figures. But such errors are trivial in comparison with the real difficulties encountered in reasoning. We have nothing worse to say against a logic which is content with guarding against these slips in formal deduction than that it is content with very little.

On the next page we find an equally strange misunderstanding. Mr. Rieber claims as "a concession of the greatest importance" our recognition of the fact that the old syllogistic reasoning about class-relations is not entirely without value. His remark that "If there can be found a single instance where the form of thought does not have to wait upon the matter, controversy is at an end and the formal logicians have won the debate" shows that he totally misunderstands the issue that has been raised. If he were right in saying, as he does, that formal logic's only claim is that a single instance can be found in which its method is harmless, then no one would have raised an objection. What we quarrel with is not this modest claim but the extension of it—an extension which Mr. Rieber himself at once proceeds to make. One would have thought that even a formal logician might have hesitated to argue that because a principle may be harmlessly applied over a limited field "there is nothing to prevent" an unlimited application of it. What sort of logic can it be that sees nothing to prevent our forming a universal rule from a single instance which happens not to contradict it? Anyhow, it is precisely the value of this *extension* which is the point at issue.

His defence of the modal adverbs, again (p. 60) seems to be that they express some differences between the kind of evidence relied upon by their users. This no one would deny. The objection raised against them is that we cannot make either a true or a false belief any truer than it is by merely *claiming* that there is no room for error in it; that even the most self-satisfied modal adverbs express no more than the fallible satisfaction of their users.

When we turn to chapter vii., which is called "The Case against the Syllogism," we find that the only two objections which Mr. Rieber seems to have met with are (1) that the Syllogism begs the question, and (2) that it is not universally applicable. Neither of these objections has any weight with critics such as Dr. Schiller,

Prof. Dewey, or myself. We should admit that any syllogism may, but need not, be used for begging a question; and, while holding that many arguments cannot effectively be reduced to the form of a single syllogism, we should maintain that no argument ever existed which did not use throughout its texture the application of rules to cases, and which was not therefore *to that extent* syllogistic. So far, apparently, Mr. Rieber agrees with us. But, taking the syllogistic process as consisting entirely in the application of rules to cases, the special fault we find with it is that in so far as it is kept formal it ignores the difficulty of providing against ambiguity in the middle term. We hold that to ignore this difficulty is to ignore the chief source of error in actual reasoning; that all the most plausible error in thinking occurs through mistakenly connecting a given rule with a particular case; the mistake being conditioned by the need of using general terms as predicates; general terms, as such, being always *liable* to be used ambiguously.[1]

In the chapter on "Novelty and Identity in Inference," however, this subject is indirectly touched upon. Mr. Rieber rightly sees that the modern conception of 'essence' is revolutionary from the point of view of formal logic, though he partly fails to understand the nature of the revolution intended. "The new theory," he says (p. 147), "recognises only one law, namely, the law that there shall be no law." A truer account would be that the pragmatist holds that trust in laws is generally useful, but is always liable to be pressed too far. But the pragmatist does not leave this dictum unexplained. He does not—as Mr. Rieber does—envisage the three abstract possibilities, 'All stability and no risk,' 'No stability and all risk,' and 'Some stability and some risk,' and then rest content to choose one of these three as his maxim. Instead of treating the matter in this cut-and-dried way he explains at length what the risk consists in—the liability of any rule to be *misapplied* in consequence of the unavoidable indefiniteness of the general terms without which no rule can be expressed. Like every one else he sees that without some trust in rules no reasoning can ever take place, and that our trust in rules is often justified by events. But he also sees that there is a source of error in reasoning which baffles all attempts to guard against it absolutely beforehand. The inevitable indefiniteness of the general term X becomes *ambiguity* wherever the distinction between AX and BX becomes for a given purpose important; if the ambiguity remains unnoticed, error results, while if it is noticed the reasoning is checked until the ambiguity is removed. Instead therefore of being content with 'no stability and all risk' the pragmatist (if forced to put his meaning in a nutshell) would incline to express it in some such form as 'no perfect stability except by reference to limited

[1] Readers who are not already aware of this criticism will find it more fully expressed in Dr. Schiller's *Formal Logic*, chap. xvi., § 6, or in my books: *Use of Words in Reasoning*, § 13; *Application of Logic*, § 11; *Elementary Logic*, §§ 31, 32.

purposes'. It is in the conception of truth as relative to purpose that the chief revolutionary doctrine of pragmatism consists.

Mr. Rieber fails also to understand our criticism of the Laws of Thought. He is content to repeat (p. 150) the old plea that "every argument against any one of these three Laws always pre-supposes one or all of them". What this plea overlooks is the pragmatist contention that all criticism of a law is criticism of that law *as applied* in some particular manner. Thus we find nothing *false* in (*e.g.*), the Law of Identity taken apart from all its applications; the objection made is that the 'Law,' so taken, is meaningless. It is a mere phrase, and not a law at all. But taken in any way that does give it a meaning, what the Law (applied) says, is that some particular thing which happens to be *called* A really deserves that name as predicate. Now Mr. Rieber himself understands (p. 147) that there is no predication without risk. And all that we say about the Laws of Thought is that, in so far as a meaning is given to them, they involve predications and so do not escape this liability. Whenever they are *used* they are liable to be used wrongly. Where, then, is the 'presupposition' that the formal logician talks of? The special thing that the pragmatist does *not* presuppose is that there is any intelligible and respectable Law of Identity as distinct from particular predications. In the generalised form 'everything that is called A really deserves the name,' the Law would not appeal to anybody. But the pragmatist, like other people, is willing to take risks of error in using predicates. The difference is that he is also ready at any time to admit the existence of the risk. It almost looks as if Mr. Rieber here confused risk of error with actual error, and supposed that because an assertor, as such, does not admit that what he calls A *is not* A, therefore he cannot admit that it *may* be wrongly so-called.

Another curious mistake is the statement (p. 23) that "Schiller, Sidgwick, and Mercier have unhesitatingly declared, not only that all truth works, but also that all that works is true". Readers of MIND may remember that this point was raised against Dr. Schiller by Miss Stebbing in N.S. No. 83, and that in the next No. Dr. Schiller unhesitatingly declines to endorse her account of his view. As for myself, I find short phrases like "all that works is true" too ambiguous to be recommended. If we take "works" as equivalent to "serves a purpose," then we still have to distinguish between what serves one purpose and what serves another. While it may be safe to say that what does *not* work is thereby proved false, or that what serves a given purpose is *so far* true, it certainly will not do to say that what serves a given purpose, and is therefore so far true, is sure to serve any other purpose that can be suggested.[1]

But though Mr. Rieber thus fails to understand the latest logical criticism, he has in fact arrived at some of its conclusions by an independent path, and has made some notable advances beyond

[1] See also MIND, No. 89, p. 100.

the traditional logic as usually taught. These are chiefly due to his readiness on occasion to break down the artificial barrier between logic and psychology. He has freed himself entirely from the view that concept, judgment, and inference have any real independence of each other. He understands that all judgment is the answer to a previous *question*, that (p. 67) "one does not judge unless one feels the actual constraint of a doubt," that (p. 90) inference is at every step entangled with proof, and that (p. 127) "the thought-unit is the syllogism itself," the syllogism being here viewed as "a unity of correlated elements existing intrinsically in correlation".

There are in particular two pragmatist doctrines which might help Mr. Rieber to make some further important advances. One of them is the doctrine that all recognisable truth is truth *for a purpose.* This would have helped him, for instance, in his chapter on "Novelty and Identity in Inference". He would have seen how the problem about the progress of knowledge is illumined and explained when, instead of being content to say "we do have perfect knowledge in part" we claim that we do get *sufficient* knowledge for this or that limited purpose. Mr. Rieber's own view, as expressed at the bottom of page 172, does not appear to conflict in any way with that of the pragmatists; only the latter is a little less vague and more suggestive of ways of testing the truth of particular judgments.[1] It would help him, further, to understand our view of the progress of knowledge. This refers merely to the way in which new purposes call for an extension of knowledge beyond what was sufficient to satisfy old ones. Improvement is, as he says, certainly not to be measured in terms of mere movement, but that does not imply that the only possible measurement of it is by comparing it with perfection. The pragmatist is content to say that a piece of knowledge which suffices for purpose A, but not for purpose B, is improved when it is so modified as to suffice for both of these purposes. And such improvement may go on indefinitely without reaching a condition in which it would provide for all the purposes that are possible.

A second point in which Mr. Rieber's views would benefit by a knowledge of recent criticism is in regard to ambiguity, and its remedy definition. He seems throughout to regard ambiguity as a defect belonging to a *word* taken apart from its use in a context. Such a view is probably traceable to the old assumption that a definition is better or worse according to its success in serving purposes *in general.* In his chapter on the "Nature of Inference," for example, the failure of certain attempts to find a perfectly satisfactory definition of this kind is given far more importance than it would have if it were clearly seen to be inevitable. The pragmatist view, on

[1] When Mr. Rieber, on the next page, contrasts his view with theirs he overlooks the fact that to them 'truth' means always 'truth for a purpose,' so that failure in working means nothing else than failure to serve such purpose.

the other hand, is that since ambiguity—as contrasted with mere indefiniteness—is a defect which belongs to the *assertion*, not to the word as such, a definition is successful or not in so far as it enables an audience to choose between two possible meanings in either of which the given assertion might be intended. Take the word 'Inference' for example. For certain purposes it is convenient to have two different words—say 'inference' and 'judgment'—to mark the difference between a belief which is expressly supported by reasons and one which is not so. From this point of view a judgment is an advance beyond its reasons. There is, in this sense, 'novelty' in the conclusion. Still more obviously there are cases where a judgment passes through various stages of comparative richness of meaning as new facts come to light and modify it; here, too, each advance may be regarded as a novelty; that is to say, the process may be better understood if it is called one of inference rather than of mere judgment. But on the other hand there are certain purposes for which the connexion, rather than the distinction, between inference and judgment has importance. As noticed already, it is one of the strong points of Mr. Rieber's book that he is aware of this fact and has followed it up in considerable detail. He sees that when our purpose is to understand as much as possible about the nature of thought, and its liability to error, we are driven to over-ride a number of abstract distinctions which are useful for other purposes. It is then no longer important to draw artificially sharp dividing lines between various stages, or between various aspects, of the process of arriving at a more or less reasoned judgment. It becomes important, rather, to show as Mr. Rieber does their artificiality, and the obstacles they put in the way of a fuller understanding. Just because of the value of Mr. Rieber's own exploration of the thinking process it has seemed to me worth while to dwell at some length upon his failure to accept the help which he might have received from the pragmatists.

ALFRED SIDGWICK.

Some Suggestions in Ethics. By BERNARD BOSANQUET, D.C.L., LL.D. London: Macmillan & Co., 1918. Pp. viii, 248.

THIS is a small book, consisting of disconnected Essays on a variety of questions bearing upon Ethics; but it is essentially a more coherent whole and a more valuable contribution than many larger and more systematic works. Some of the problems dealt with are of almost purely theoretical interest; but all of them have some bearing either on particular practical difficulties in the conduct of life or on the general attitude that ought to be adopted towards life. All the subjects are treated with the usual subtlety and with even more than the usual felicity in illustration that we have learned to expect from the author. The value of the book lies mainly in its careful handling of detail, and it would not be

possible to do justice to it without somewhat elaborate discussion. We must content ourselves here with a few notes.

Among the more purely theoretical problems that are dealt with may be mentioned that of the possibility of defining value (chap. iii.). The comparison that has been made between the conception of Good and that of such a quality as Yellow is referred to, and it is urged that Good must be regarded as a category. I think this is a sound contention; but it must be admitted that many lists of categories from Aristotle to Kant have not given it a place. The question is a difficult one, and probably calls for a fuller discussion than it has yet received.

Most of the other problems have a more direct bearing on practice. Dr. Bosanquet does not claim, however, that philosophy can give us much help of a directly practical kind. 'I do not believe in casuistry,' he says in the Preface, 'as a guide to conduct.' The reason for this is given in one of the Essays (pp. 155-156). 'Casuistry, the application of general principles of good to moral conduct, is necessarily a source of fallacy and sophistry. The reason is, as we have seen, that it is impossible, apart from a complete creative construction, in terms of a unique complication of demands and materials, to determine which of the innumerable truths applicable to a concrete course of conduct is to be insisted on in a given case. . . . Though general advice may help to put the elements of the situation before you, no mind but your own can strike the decisive balance of values and resources and appropriateness to your scheme of life.' I am not sure that this is quite fair. Is not an onlooker sometimes a better judge than the actor? And are there not some general considerations that are apt to be overlooked by both? What Dr. Bosanquet urges seems to suggest a limitation to the function of casuistry, rather than its complete rejection. Would not similar objections apply to most of the special arts? To take an instance that is unpleasantly prominent at the moment, I suppose there are some general principles that apply to the conduct of war, and it is possible to explain some of the ways in which these principles have to be modified in special circumstances; yet it remains true that it is the business of a good General to consider for himself the actual situation with which he is confronted and the best means of dealing with it. It would be foolish on his part to be content with rules and precedents; and it would be foolish on the part of his critics to judge him simply by his observance of them; but it would surely be still more foolish to ignore them. The same seems to be true of poetry and painting and all other activities in which there is scope for originality. There are, no doubt, points of difference. It is, in some respects, more difficult to determine what is right in the general conduct of life than in artistic achievement, because the latter (at least in the more purely practical arts) is mainly a question of skill, and can be more readily estimated by the immediate result. On the other hand, is it not rather more dangerous to seek

to be original in the general conduct of life than in a special art? It seems to me that there are good and bad kinds of casuistry. The bad kind rests on rules or commandments, and points to exceptions that have to be made in difficult cases. The admission of such exceptions tends to vitiate the rules, and so to destroy the system of morality with which they are connected. The good kind rests on principles, rather than on rules, and seeks to explain how the principles are to be applied in different cases. Whether this is to be called casuistry would seem to be a verbal question. It is, at any rate, an attempt to deal with difficult cases. Many of the discussions in this book seem to me to be excellent illustrations of casuistry in this sense. In the first chapter, for instance, there is a consideration of the question in what circumstances it is right to sacrifice one's own apparent good (*e.g.*, one's life) for the sake of others; and the conclusions that are reached are pretty definite. Similarly, the discussions about punishment in the eighth chapter lead to pretty definite results with regard to the conditions under which punishment may be rightly inflicted. It might perhaps be urged that this is a question of law, rather than of morality; but at least justice is recognised by Dr. Bosanquet as one of the virtues (p. 232).

Self-sacrifice is discussed in several places. Indeed, it may almost be said to be the main topic throughout. Goethe's 'Stirb und Werde' is specially emphasised in the seventh chapter. Goethe, however, gave the *Werden* at least an equal place with the *Sterben*. His insistence on self-development even led to his being described (no doubt unjustly) as an egoist; and he certainly based upon it a claim to personal immortality. Dr. Bosanquet is rather inclined to urge (pp. 84-85) that a man should be content to have the work of his life carried on by others. Without definitely rejecting the possibility of immortality, he is at least very critical with regard to it. He quotes (p. 188) the reference of Browning to

> That sad, obscure, sequestered state,
> Where God unmakes but to remake the soul
> He else had made in vain, which must not be;

and remarks that 'it would seem the soul remade must be a new being'. One may ask whether he is quite faithful here to his own conception of identity in difference. Are we not all, to some extent, new beings at different stages in our lives? In general, while it would be untrue to say that Dr. Bosanquet treats sacrifice as an end in itself, he at least regards the gain that is achieved by it as being won in the life of humanity and the universe, rather than in that of the individual. His attitude may be compared with that expressed in the famous saying of Spinoza (a favourite one with Goethe) that he who loves God does not desire that God should love him in return. An obvious retort to this is that, if God did not love him in return, he would be better than God. A loving worm, according to Browning, would be diviner than a loveless

God. At any rate, it may be doubted whether many, even among the greatest saints, have been free from the desire to which Spinoza referred. One may recall the cry of Christ—'My God! My God! Why hast Thou forsaken Me?' I understand Dr. Bosanquet's contention to be that the results that follow from the lives of the saints are a sufficient recompense even for their supreme agonies and apparent failures. They rest from their labours, and their works follow them; and this is enough. Perhaps it is; but it is certainly difficult to repress the human desire that both they and others should at least *know* that their works follow. That they should go out for ever in darkness, is hard to reconcile with a perfect universe. However, I do not seek to press objections, but only to call attention to the interesting problems that are raised, and to suggest possible doubts.

There are certainly few books that contain so much that is interesting and instructive in so short a space.

J. S. MACKENZIE.

VII.—NEW BOOKS.

Platonism. By Paul Elmore More. Princeton University Press. 1917. Pp. ix, 307.

This is a difficult book to review, and, for reasons which will appear, it is not quite easy for me to be fair to it. I must, however, try my best; for I cannot be taken as acquiescing in the account which the writer gives of my views. In the first place, it must be said that Mr. More takes Platonism seriously, and that he has tried to give a personal interpretation of it instead of serving up the old formulas afresh. These are great merits. In the second place it must be said that he writes well and is always interesting, even when he appears to be wrong. On the other hand, he is too apt to dispose of difficulties by a mere *ipse dixit*, and he has not a very firm grasp of the history of Greek thought. It makes a bad impression, for instance, when we find on page 5 that he regards the ascetic Pyrrho as a hedonist. We know that Pyrrho looked upon virtue not only as the highest, but as the only good, and that his scepticism consisted mainly in his view that everything else, pleasure included, was indifferent. Such things are not negligible; for we are told in the *Preface* that the aim of this volume is "to lay the foundation for a series of studies on the origin and early environment of Christianity, and on such more modern movements as the revival of philosophic religion in the seventeenth century and of romanticism in the eighteenth". These are great themes, and Mr. More has certain qualifications for dealing with them; but it is certain that he will not do so adequately till he has learnt to find more in Neoplatonism than "theosophical speculation," and till he sees the inappropriateness of calling Plotinus and Proclus "the barbarians of Alexandria".[1]

The Socrates of this work is not by any means the mere lay figure to which we have been accustomed, but a real human being. In the main, Mr. More frankly identifies the "historical" and the Platonic Socrates, and he sees (p. 254) that the meeting of the young Socrates with Parmenides and Zeno must be regarded "not only as a fact but as one to which Socrates was fond of alluding". He also distinguishes clearly between the "sceptical" or "rationalist" side of Socratic thought and the "mystical" or "intuitive," and he endeavours to do justice to both of them. That being so, it is difficult to see how he came to credit Prof. Taylor and myself with the view that Socrates was a "pure mystic," and that all the rationalism in the dialogues comes from Plato (pp. 11, 12). I am sure that Prof. Taylor has never said anything of the sort, and I

[1] On page 279 we read that "There (*i.e.*, at Alexandria) its chief exponent was Plotinus," from which it appears that Mr. More really thinks that Plotinus taught at Alexandria. He was perhaps born in Egypt, and he studied in his younger days at Alexandria, but he taught at Rome, and it was there that he developed his philosophical system. Proclus taught at Athens and had nothing to do with Alexandria.

know that I have said just the opposite. I have preferred, indeed, to use the Greek terms "enthusiasm" and "irony" for the two elements in the character of Socrates,[1] and I have protested against any account which ignores either of them. I have also pointed out that, however much Socrates had been influenced by the religious movement of his youth, and however fully he may have possessed the mystical temperament, his attitude towards particular Orphic or Pythagorean beliefs and practices is always one of kindly but humorous aloofness.[2] The "rationalist" always has the last word. In fact it is Mr. More who attaches an exaggerated importance to one feature of the "mysticism" of Socrates, the "divine sign" or "voice," and, as this is closely bound up with what I take to be the main contention of his book, it will be necessary to say something about it.

To those who realise the influence of Pythagoreanism on Socrates the "sign" presents no great difficulty, and the humorous way in which Socrates sometimes speaks of it is quite in keeping with his general attitude to such things. We are clearly bound to accept, as Mr. More does, the explicit statement of the *Apology* that it only gave negative advice. It never told Socrates to do anything. This, however, is hardly sufficient justification for the contention that, to the true Platonist, spiritual intuition always means inhibition. It will be best to give this remarkable doctrine in the writer's own words. He says (p. 272):—

> To the true Platonist the divine spirit, though it may be called, and is, the hidden source of beauty and order and joy, yet always, when it speaks directly in the human breast, makes itself heard as an inhibition; like the guide of Socrates, it never in its own proper voice commands to do, but only to refrain.

Now this implies that the "divine sign" was the guide of Socrates in questions of right and wrong, and that it is to be identified with the spiritual intuition which enabled him to transcend his scepticism. That is a view which can be refuted from the *Apology* itself. There we are told that the "sign" constantly came to him on quite trivial occasions (*πάνυ ἐπὶ σμικροῖς*) and opposed his doing something he was about to do. A good example of this is found in the *Euthydemus* (272*e*), where Socrates was about to leave the company and the divine sign opposed him, so that he sat down again. Nor is there a single case where it restrains Socrates from action on grounds of what Mr. More calls morality; it has to do solely with the results of acts in themselves indifferent, and it is justified solely on prudential grounds. The passage where Socrates tells his judges that it was the "sign" which made him abstain from political life is no exception; for he immediately goes on to say that the "sign" was quite right in its opposition, since, if he had gone in for politics, he would long since have been put to death (*Apol.*, 31*d*). In fact, Plato agrees with Xenophon at least in this, that the "divine sign" was a kind of divination (*μαντική*) which gave premonitions of undesirable results. It has nothing to do with right or wrong, but only with such matters as we might decide by tossing up. Of course it is impossible to believe it was really the "sign" that kept Socrates out of politics. That is only the high irony of the speech. We are not told that it was this mysterious voice that warned him to take no part in the arrest of Leon of Salamis or to refuse to put an illegal motion to the vote at the trial of the

[1] *Greek Philosophy*, Part I., §§ 101, 102.

[2] See especially my edition of the *Phædo*, Introd., p. lv. 59, and the notes there referred to.

generals. These were abstentions, indeed, but not of the kind for which Socrates required any mysterious sanction. On the other hand, he insists with complete seriousness that he had received certain very positive commands indeed from "the god" (or "God," as his hearers might choose to understand the words). It was "the god" and not the "divine sign" that bade Socrates neglect his private affairs and devote his whole life to the conversion of his fellow-citizens by getting them to "care for their souls," and he knew that it would be wrong to disobey this command, even if it were to cost him his life, as it did. He represents himself as a soldier of God, and military commands are not solely or mainly inhibitory. The words *ἐμοὶ δὲ τοῦτο, ὡς ἐγώ φημι, ὑπὸ τοῦ θεοῦ προστέτακται πράττειν* (*Apol.* 33*c*) are enough in themselves to refute Mr. More's view, and it would be easy to add to them. It needed no mysterious voice to tell Socrates what was right for him to do, and the inhibitory sign is a half-belief of which he does not speak quite seriously. It had nothing to do with the knowledge which is also goodness because it is knowledge of what is good for man's soul. No doubt Socrates thought there might be something in it, and it generally, so he tells us, turned out right, but it was in no sense the guide of his life.

I have dwelt on this because I believe it goes to the root of the matter, but I would not leave the impression that there is nothing to be learnt from what Mr. More says of Socrates. On the contrary, much of what he writes is true and well put. He has also some instructive things to say of the later dialogues, and he rightly insists on the importance of the *Laws*. I cannot, however, make out what he supposes my view of the second part of the *Parmenides* to be. He himself maintains that all the arguments are intended to lead to an *impasse*. That is just what I have said, though Mr. More does not mention the fact. I had even suggested that Zeno's account of the purpose of his own arguments was intended as a hint of the way we are to take the latter part of the dialogue. Mr. More was not bound in any way to mention this, except that he falls foul of me, in a passage which I do not understand, for having turned a negative into a positive conclusion, a thing I had certainly no intention of doing and which I cannot see that I have done. Mr. More's own interpretation does not appear to differ fundamentally from mine, and I have surely left no one any excuse for supposing that I regard the arguments otherwise than as reductions to the absurd.[1]

Mr. More will have it that there was no Platonic philosophy beyond that contained in the dialogues. If that is so, Plato must have differed from most other thinkers. It is surely very unusual for a man to find expression for his ripest thoughts in his writings, and that will be specially true of one who had learnt from Socrates to lay such stress on the living word. In such cases we expect to hear a good deal from the philosopher's pupils which we look for in vain in his published works. Now Mr. More makes no attempt to explain what Aristotle says about Plato. To be sure, Aristotle's criticisms are a trouble to all of us, and he would be a bold man who would say that he fully understood them. No doubt it is pretty clear that Aristotle either could not or would not understand certain parts of Plato's teaching, but he had been a member of the Academy for twenty years, and when he tells us distinctly that Plato taught certain things which are certainly not to be found in his dialogues, are we to disbelieve him? There were scores of people living

[1] Mr. More originally published this criticism in the *Philosophical Review* (xxv., 135 *sq.*). I did not reply, because I thought he had made a slip, as we all do sometimes. However he has now reprinted it *verbatim*.

who could have contradicted him if he had invented these things, but as a matter of fact he is confirmed on one of the most important points by another member of the Academy, Hermodorus. In general, I should say that Mr. More's treatment of such questions is seriously weakened by his failure to make clear to himself the nature of the Academy and the Lyceum and the relation between them. For instance, he actually thinks well of Teichmüller's madcap suggestion that certain passages in the *Laws* are a reply to Aristotle's *Ethics*. Surely it is certain that the course of lectures for which the *Ethics* formed a basis cannot have been delivered till after Plato's death, and as good as certain that it was not published till after the death of Aristotle himself. On the other hand, Mr. More will have nothing to say to the *Epistles;* but, after all, the *Epistles* exist, and, if we are going to dismiss them as forgeries, we are bound to give some plausible account of how they came to be and when. Prof. Shorey once spoke of a "Philonic or neo-Platonic tendency" in one of the *Epistles*,[1] but that was an inadvertence, seeing that Cicero had read the *Epistles*, which means that they existed long before there were any Neoplatonists and even before Philo. In fact those who have argued recently against the genuineness of the *Epistles* have mostly been forced to admit that they must have been written by a contemporary of Plato himself, and this seems a very difficult thesis to maintain. The main criticism I would make, however, is that a work on Platonism, especially if it is to be a foundation for a series of studies on its influence in later days, must itself be founded in a clearer view of the historical conditions in which Platonism arose and in which it was handed down to succeeding generations. Apart from that, it will be built on the sand.

JOHN BURNET.

Studies in the History of Ideas. Edited by the Department of Philosophy of Columbia University. Vol. I. New York: Columbia University Press, 1918. Pp. 272.

It is, of course, a common-place that to appreciate any doctrine whatsoever, one needs first of all to determine as precisely as possible what it meant to its originator. And to do this, we need, as the editors of the present volume say in their *Prefatory Note*, to exercise "historical imagination". Even in pure mathematics the work of any one great man can hardly be understood without some such acquaintance with his historical *milieu*, and in philosophy, where more than anywhere else formulæ seem capable of almost unlimited variation in their meaning, such knowledge is absolutely indispensable. The task of the contributors to this volume is thus a very important one, most important, perhaps, in a country like the United States when the sense of historical continuity with the whole of past civilisation is perhaps inevitably less vivid than among the leading peoples of Europe. In the main the volume is therefore to be highly commended, even where the essayists do not seem to be saying anything particularly novel. Even where one of the writers is explaining what a specialist student will probably know already, it is an advantage to have historical truths about philosophical ideas summarised briefly and expressed in a style likely to appeal to the ordinary educated man of good intelligence. Of course it would not be denied that the value of the exercise of imagination commended by the editors depends upon the qualification expressed by the adjective "historical".

[1] *Classical Philology*, x. (1915), p. 87.

Three of the essays, *Appearance and Reality in Greek Philosophy*, by M. T. McClure, *The Meaning of φύσις in Early Greek Philosophy*, by W. Veazie, and *An Impression of Greek Political Philosophy*, by W. T. Bush, deal with Greek thought. The first two of these do not seem to me to have any very great value. Mr. McClure's main thesis—one which no one is called on to dispute—is that what a philosopher means by "appearance" is commonly that part of reality in which he feels no special interest. Now, it is argued, in Greek thought there are three main lines of interest, the scientific, the mystical, and the humanist. We must therefore expect to find that a given Greek philosopher will decide what is to be degraded to the level of "appearance" according to his own "temperamental" interest in science, mysticism, or humanism. Democritus regards sense-qualities as only "appearance," because he is before all things a man of science, Plato treats the sensible as "appearance," because he is interested in mysticism and in conduct, and is indifferent to science, and so on. There is truth in such a view, but the great difficulty which the essayist overlooks, is that the most eminent philosophers are so rarely representative of a single pure "type". Mr. McClure is reduced to the absurdity of denying the importance of the scientific interest in the author of the *Timæus*, and asserting more than once that Greek science "culminates" in Democritus. One wonders whether he has heard of Archimedes or knows that Democritus—a younger contemporary of Socrates—taught that the earth is flat. Mr. Veazie writes briefly on the *Meaning of φύσις in Early Greek Philosophy*. His object is to controvert Burnet's assertion that *φύσις* in the early men of science means "primary body," and to argue that *φύσις* is "the inner nature or essence of things, their potency, that in them which has the *power of motion in itself*". The very words seem to be anachronistic; they presuppose Aristotelianism. The author has the temerity to accuse Burnet of "misquoting" Aristotle, *Met.*, 1014*b*, 16, on the strength of his own mistranslation of the passage. *ἐπεκτείνειν*, used of a vowel, does not of course mean to "accent" it, but to "produce it," "make it long," as Burnet renders. More interesting and full of good observations is Mr. Bush's impressionist sketch of Greek political philosophy. He is abundantly warranted in asserting that civic faction was the curse of the Greek communities, and that the Platonic-Aristotelian doctrine is meant to provide a cure for the evil. He might have strengthened his case by a fuller consideration of the economics of the *Republic*. But it is hardly historical to look for the bribe-taking kings of Hesiod in the history of Attica or to assert that "Plato's time" was one of violent party strife in Athens. If "Plato's time" means the period in which Plato wrote his best-known works, it was one of quiet and order, the age of Eubulus. I cannot think why Mr. Bush refuses to admit that Solon was the real founder of Athenian democracy. The strength of the democracy lay precisely in the power of the popular dicasteria, and these were Solon's distinctive creation. And, with all respect to Prof. Santayana, the statement that "Plato had no physics" is pure nonsense.

Mr. Coss writes a brief but sufficient note on Francis Bacon's recognition of the need for a systematic History of Philosophy. There are no less than three essays dealing with Hobbes. Prof Dewey's paper on *The Motivation of Hobbes's Political Philosophy* is exceedingly opportune. If he should ever meet with a little brochure by the present writer on *Hobbes*, he will find that he is not alone in insisting on the points that Hobbes never meant to represent the moral law as arbitrary, and that his championship of autocracy is a secondary matter, due to the political circumstances of his age, as compared with his primary object, the *secular-*

isation of political philosophy. Prof. Dewey has illustrated these points admirably by showing precisely what were the objections raised by Hobbes's most intelligent contemporary critics, such as Harrington and Eachard. Mr. Lord's paper on Hobbes's *Attempt to Base Ethics on Psychology*, and Mr. Balz's essay on *The Psychology of Ideas in Hobbes*, especially the latter, strike me as sound and valuable work.

Mr. R. B. Owen writes on *Truth and Error in Descartes*. The one point to which he is, I think, hardly alive is the important one that the view of intelligence or understanding as intrinsically infallible, which leads Descartes to find the source of all intellectual error in the misdirection of the will, is no Cartesian novelty, but a standing Scholastic doctrine, derived ultimately from Greek philosophy. Mr. Owen may find the same view constantly urged to-day by Neo-Thomists like the able writers of the *Rivista Neo-Scolastica* against the agnosticism and phenomenalism of Positivists and Neo-Kantians. Its ultimate source is the Platonic-Aristotelian doctrine that all things have a tendency towards their own specific good. The good of the understanding is truth, therefore the understandiag naturally tends towards truth. It is as much a Thomistic as a Cartesian inference that error only arises when this tendency is opposed from without. Mr. Cooley, in his paper on *Spinoza's Pantheistic Argument* is more awake to the impossibility of understanding the seventeenth-century philosophers without reference to the Neo-Platonic doctrines they inherited from Christian and Jewish Scholasticism. But I doubt if he is sufficiently acquainted with Neo-Platonism itself. If he were, he would hardly call it a ἓν και παν doctrine. (The peculiar accentuation is Mr. Cooley's, not mine.) The One, according to Plotinus and Proclus, is *just* the One; it is emphatically not πᾶν. Like Plato himself, the Neo-Platonists were quite emphatically Theists. In fact, the Forms become with them quite subsidiary to God. The Scholastic doctrine of God, so far as it is not based on appeals to revelation, is Proclus pure and simple. There are other points on which I do not find it quite easy to follow Mr. Cooley. Thus the fallacy of illicit major with which he charges Spinoza on page 178 is, I think, a creation of his own. Spinoza's premiss is not "everything that can be limited by another thing of the same nature is finite," but everything that is finite can be limited, etc." Spinoza is formally entitled to this simple conversion of his definition just because it is a *definition*.

The reasoning of Kant's first "Antinomy," referred to on page 179, is not specifically "Neo-Platonic". It is Eleatic, and goes back to Melissus of Samos. Another thing I do not understand is the statement on the same page that "Newton's discovery of universal gravitation" somehow shows that the universe is limited not from without but by an internal necessity. If we are to be pedantically accurate, we must remember that Newton does not assert the *universality* of gravitation, but only its existence *usque ad orbem Saturni*. Even if we extend it throughout all space, it is not clear how Mr. Cooley's corollary can be deduced. He *seems* to be regarding gravity, in a very un-Newtonian fashion, as a *qualitas occulta*. Prof. Woodbridge writes at length on Berkeley's *Realism* as "the controlling motive in his philosophy". His essay strikes me as particularly admirable, and as definitely establishing its main contention that the influence of Locke on Berkeley has been generally both misconceived and over-rated. I think Prof. Woodbridge fully makes out his point that Berkeley's real object is to vindicate naïve realism against the "mathematical philosophers," and that Locke only comes into the argument because his account of our "ideas" lends some support to the "mathematicians" who substitute a purely geometrical "real world" for that in

which the plain man believes. And I am equally in sympathy with the penetrating observation that Berkeley's criticism is that of a man keenly interested in mathematics, but of a definitely unmathematical mind. The whole essay is a valuable contribution to the study of one of the most misunderstood of philosophers. Mr. A. Leroy Jones has a short note on some coincidences between Thomas Brown's doctrine of beauty and the Æsthetics of Prof. Santayana. The volume closes with two essays concerned with logical questions, *The Antinomy and Its Implications for Logical Theory*, by W. P. Montague, and *Old Problems with New Faces in Recent Logic*, by H. T. Costello. Both offer matter for profitable reflexion, and both suggest questions upon which I should be glad to dwell in a few words, but for reasons of space.

A. E. Taylor.

The Economic Anti-Christ: A Study in Social Polity. By W. Blissard, M.A., Rector of Bishopsbourne, in the Diocese of Canterbury, author of *The Ethic of Usury and Interest*, etc. London: George Allen & Unwin, Ltd.

The Economic Anti-Christ is for Mr. Blissard that system of "Economic Militarism" by which this country is dominated just as Germany is by military Militarism. The book has a philosophical character in so far as it deals with large questions in a large way. It bases the Ethic which it recommends, and its exposure of the false Ethic commonly accepted by modern Society upon a principle. It contains some fine statements of the fundamental principle of Christian Ethics and some fine interpretations of Christian Theology in terms of modern thought. The writer, I note, frankly gives up the popular interpretations of divine Omnipotence (to which he quite rightly attributes some of the social apathy of the religious world). His Theodicy, however, turns entirely upon the doctrine of Free-will in the sense of extreme Indeterminism. But the book contains little theoretical discussion, whether metaphysical, ethical or economic. In the main it is a practical appeal—an appeal especially to the Church—to recognise that what is wrong with itself, and with the world which it hopes to save, is not so much individual wrong-doing as a fundamentally unjust social order. The Anti-Christ is in fact Capitalism, and the book is an appeal to the Church not to put its strength into denouncing particular sins such as drunkenness and sexual immorality, but to recognise that "the real national sin is that of faulty organisation," to use its influence to get it altered, and as a step thereto to set its own economic house in order.

Considered from a practical point of view the book is impressive. I for one should not be disposed to dispute Mr. Blissard's general ethical principles, or his condemnation of the system under which the owners of capital absorb so large a part of the national income which they, *qua* capitalists, and in most cases hereditary capitalists, have contributed nothing to earn. Yet, even considered as a practical appeal, the book loses by its failure to recognise the other side of the question. Mr. Blissard falls into the common socialistic fallacy of dividing society into two sharply opposed sections—the exploiters and the exploited, the oppressing and the oppressed, the idle and the workers. It is quite true that the capitalist, if he has enough capital, *need* not do any work, but it is a mistake to talk as if the great majority of those who own some capital, habitually did no work, or, on the other hand, to ignore the fact that vast masses of capital are in part owned by men who are individually by no means rich or by societies of men who are in every sense of the

word "working-men". It is a mistake not to recognise what, under the existing social order, are the functions actually performed by capital and the capitalist. It is true that the tasks of management, of the entrepreneur, of the "captain of industry," are separable from the actual possession of capital: the capitalist may personally have contributed nothing to these things beyond what is implied in placing his capital in (from his point of view) the right hands. But it is equally true that there is normally a connexion between the two things; that the capitalistic system has certain economic social advantages, that it encourages industry and enterprise, that it places on the whole the management of industry in capable hands, and that in so far as it is socially advantageous, it has a relative justification. Unless these facts are duly recognised, it is not likely that the difficulties of replacing the system by one which shall be juster and more socially beneficial will be duly recognised and grappled with. Even on the ethical side it should not be assumed that the possession of property is itself a sin, or that it is almost certain to convert the possessor into a sinner in other ways. I have always, indeed, thought that the justification of Property by its effects on character which one meets with in such writers as Prof. Bosanquet too often ignore the bad moral effects of large individual wealth. There are passages in this book which might be commended to the attention of such writers: on the other hand, Mr. Blissard might learn something from Mr. Bosanquet and his school in spite of their leaning to the 'Whatever is, is right' theory of the Universe. Mr. Blissard is so possessed with a fine fury against capitalism that he seems disposed to attribute all the evil of the world to its influence. He writes of the well-to-do classes as if they were habitually wicked, of the working-classes as if they were all saints, or would be so but for the system. Feminism, against which the author has a particular animus, and the restriction of families (the author does not explain whether he means that every mother is bound to have a maximum family) are spoken of as entirely due to the sense of unconditioned will produced, especially in women, by the power of living without labour. All other social evils are traced to the same source.

All through the book Mr. Blissard treats the capitalist evil as one which is worse in this country than anywhere else in Europe, and worse than it has ever been. The former statement is at least questionable: the second is surely untrue. He speaks as though the capitalist was in undisputed possession: as if nothing had been done to dispute and limit his sway, and even to introduce considerable instalments of Collectivism. There is no recognition of the large extent to which by Trade-Union action, by legislation and perhaps (I fear not to a very large extent) by the improvement of public opinion, the evils he deplores have been mitigated. There is one grudging reference to the Factory Acts, but we hear nothing about the Wages Boards, the compulsory Insurance Acts, the death duties, the increased taxation of wealth, the diffusion of education, and the like. Sometimes the writer's prepossessions make him positively blind to the most obvious economic facts. Thus, in considering the economic effects of the war, he enlarges upon the iniquities of profiteering, and quite correctly notes the effect of the war-loans in enormously increasing the numbers of the Capitalist class and the burden of the annual drain upon the wealth earned by the national labour. He forgets (what has been pointed out by Mr. Sydney Webb and others) that the rise in prices and the fall in the purchasing power of money will considerably lighten the real burden; and that it is practically certain, no matter what party may command a majority after the war, that the taxation which is to pay the interest and reduce the debt will be borne much more by the capital-owning, than by the wage-earning, classes.

The failure to see how largely the war is bringing about a development precisely in the direction which the author desires to move is the more remarkable inasmuch as, when we come to the few pages devoted to the question of remedies or future social policy, he has nothing to recommend but further instalments of quite moderate and reasonable evolutionary Socialism. The tone of the book had almost prepared us for something like Bolshevism. There is a really prophetic quality about the author's writing, but even in a prophet the tone of unrelieved gloom and denunciation is rather wearisome, and does not always forward the case which he has at heart. It is a pity that he should not sometimes have inspired himself by the study of the later Isaiah as well as of Jeremiah.

Since the review of this book was in type, I have heard with great regret of its esteemed author's death.

H. RASHDALL.

The Neoplatonists. By THOMAS WHITTAKER. Second edition. Cambridge. Pp. xv, 318.

The main thesis of this interesting and important book, the first edition of which has been out of print for some years, may be stated as follows. Philosophy was the living centre of culture in the Græco-Roman world, as it has never been in modern Europe. As long as the classical type of civilisation remained, philosophy was its champion and custodian. During the long period of decay, while the classical tradition was being submerged, first by the establishment of military monarchies of an increasingly Oriental type, and then by Asiatic religions and the inroads of northern barbarians, the philosophers of the empire were the defenders, the confessors, and occasionally the martyrs of the old ideas. And for nearly three centuries before Justinian, philosophy meant the syncretistic Platonism systematised by Plotinus, the one great genius of the dismal third century. The conservatives were beaten, but their defeat was not final, and was in fact more apparent than real. 'The fire yet burns on the altars of Plotinus,' as Eunapius said; and it has never been extinguished. Through several streams the fertilising flood of Greek philosophy poured into the thought of the middle ages. Through Augustine, a close student of the Platonists (whom he doubtless read only in translations), Greek philosophy became the basis of scientific theology in western Catholicism. The Pseudo-Dionysius conveyed the speculations of Proclus to Dante. The Cappadocian Fathers were steeped in Plotinus, and had the same influence upon eastern theology that Augustine had in the west. The Arabs mixed Neoplatonic treatises with their Aristotle, and through them another rivulet of Hellenism penetrated to the Schoolmen. The lineage of Christian mysticism can be traced back in a straight line through Dionysius to Plotinus and Proclus. But Mr. Whittaker, who is no friend to Christian dogmatic theology, is more disposed to emphasise the instructive and enthusiastic return to Platonism which accompanied the emancipation of the human mind from the fetters of consecrated tradition, at the renaissance. After a suspension of a thousand years, he says, men could take up the Greek problems of philosophy and science exactly where they had been dropped when Justinian closed the schools of Athens Modern philosophy, which owes little to the middle ages, may therefore be considered the immediate successor of Neoplatonism, as indeed the German historians of modern thought acknowledge when they devote their first chapters to Eckhart and Jacob Böhme. From these speculative mystics the descent is

unbroken to the great German idealists of a hundred years ago. Mr. Whittaker also reminds us of the noble catena of Platonism in English poetry ever since the renaissance, from Spenser to Shelley, or, as he might have added, to Rupert Brooke.

Mr. Whittaker holds that Greek philosophy lost the battle against Christianity partly because it would not adapt itself to the actual movement of world-politics. Its sympathies were obstinately republican. Marcus Aurelius made heroes of Cato and Brutus: and even Julian refused to be called δεσπότης. The Christians, on the other hand, were monarchists on principle, and were eager to make a concordat with an emperor who was little better than a sultan. There were, of course, other and more important factors in the triumph of Christianity. But the Neoplatonists themselves regarded the struggle, much as Mr. Whittaker does, as a phase of the conflict between Hellenism and 'barbarism,' and especially Asiatic barbarism. They were not wrong in thinking that Europe was losing its pride of place. For over a thousand years, till the English conquests in India, Europe made no impression upon Asia, and was thrice nearly overwhelmed in Asiatic invasions by the Huns, the Arabs, and the Turks. At present, the European type of polity seems to have established its supremacy, and its 'yet living rival—the continuation of Christian theocracy in its Byzantine form,' has collapsed in hideous anarchy since Mr. Whittaker's first edition.

Mr. Whittaker finds that the chief influence of Neoplatonism upon Christianity was in combating the supernaturalistic dualism—materialism combined with supernaturalism—which we find in writers like Tertullian, and in very many Christian theologians even now; and in substituting for it the spiritual or idealistic view of the world which was developed quite clearly for the first time by Plotinus. The truth is that these two types of religious thought have subsisted side by side in Christianity almost from the first, and are still the cause of sharp conflicts and deep divisions in the Church.

The metaphysical section of this book is short, but very sound. Mr. Whittaker sweeps aside the criticisms usually brought against Plotinus by those who have not read him—that his philosophy is an extreme form of dualism; that he despises the world; that he discredits reason in favour of ecstasy; and so forth. He has the courage to avow his deliberate conviction that the 'idealistic ontology of the Neoplatonists would, if accepted, clear up more things than the most ambitious of modern systems'. With this may be compared the prediction of Ernst Troeltsch, that since 'the sharper stress of the scientific and philosophical spirit in modern times has made the blend of Neoplatonism and New Testament Christianity the only possible solution of the problem, I do not doubt that the synthesis of Neoplatonism and Christianity will once more be dominant in modern thought'. Mr. Whittaker would prefer Plotinus without the 'blend'; but such utterances may be taken to indicate that this important chapter in the history of philosophy is likely to receive a decent amount of attention at last.

My only divergence from Mr. Whittaker in his chapters about the philosophy of Plotinus is on the subject of free-will. His statement that Plotinus is 'without the least hesitation a determinist' seems to me untenable. See the passages about human freedom in *Ennead* 4, 8, 5; 3, 2, 4; and 3, 2, 10.

Possessors of the first edition will find it worth while to buy the second, for the sake of the new and lengthy appendix on Proclus, which is excellent.

W. R. Inge.

The Gate of Remembrance, the Story of the Psychological Experiment which Resulted in the Discovery of the Edgar Chapel at Glastonbury. By Frederick Bligh Bond, F.R.I.B.A., Director of Excavations at Glastonbury Abbey. Oxford: B. H. Blackwell, 1918. Pp. x, 176.

Apart from 'dowsing,' which is a well-established business, authentic cases of additions to human knowledge made by other than normal methods, like the 'dreams' which revealed to Prof. Jastrow the inscription on the Babylonian cylinder which had been cut up into a signet ring, and to Prof. Verner the philological 'law' which bears his name and made his fortune, are few and far between, and it is proportionately important that they should be adequately recorded, and considered by critics with an open mind. They are also capable of being made 'good copy'; but this often militates against their being recorded in a way that is scientifically instructive rather than literarily attractive, and Mr. Bond has not altogether resisted this temptation. But his reward has been that a second edition of his book has speedily been called for, and this will give him an opportunity of making his story more complete on the scientific side. It is to be hoped that his second edition will give more information about the automatic script on which his story rests, about the automatists and the sort and amount of their knowledge, and at least one complete record of a sitting which was productive of evidential matter. So much a psychologist may fairly demand: it would be desirable, too, to have some illustrations of the variations in the script mentioned on page 67. As it stands the book only gives us selections, extracted for their bearing on the architectural and archæological problems for the solution of which automatism was resorted to, together with a certain amount of philosophic speculation (by Mr. Bond and the script) to 'explain' what happened.

Meantime Mr. Bond's story runs, briefly, thus. When the Somerset Archæological Society determined, in 1907, to excavate the ruins of Glastonbury, one of the first problems was to discover the locality and size of the Chapel of St. Edgar, which had been attached to the great Abbey Church. Mr. Bond and his friend 'J. A.'—who may be regarded as *the* automatist in the case, though Mr. Bond used to touch his hand while it was writing—made a preliminary study of the extant literature about Glastonbury, from which it appeared that the Edgar Chapel was probably quite a small affair which extended the length of the Church only by a dozen feet. On this view, the total length of 580 feet ascribed to the Church had, it is true, to be regarded as an exaggeration; but they could find no warrant for any other. The automatic script, however, asserted that the Edgar Chapel was 30 yards long, and this information, together with many other details, was found to be accurately true, when the excavations were made. It was not until long afterwards, in 1911, that an 18th century manuscript plan of the ruins was found to estimate the length of the Edgar Chapel at 87 feet (p. 62). Subsequently the script produced much detailed, and even more improbable, information about the Loretto Chapel, and as this has not yet been excavated, Mr Bond has by publishing it given hostages to fortune. In addition to this guarantee of good faith he prints a letter from Mr. Everard Fielding of the S.P.R., testifying that the predictions of the script were made prior to the excavations.

To reject so well authenticated a tale it is evident that the sceptic will have to rely in the first instance on the subconscious knowledge of the automatists. If this fails him, he can try Mr. Bond's theory (taken from a hint of James's) of a 'cosmic record' of the past, which the automatism

taps (pp. 19, 39, etc.). Still it has to be noticed that in their *form* (as so often) these messages are frankly spiritistic; they always professed to come from the monks who had lived at Glastonbury during the Middle Ages. Many of them indeed are unusually vivid and plausible impersonations, though they are not free from errors and infections traceable to the minds of the automatists, or perhaps only to mistakes in decipherment. The spiritist interpretation, however, suffers too much from bias, which, whether hostile or favourable, will not stoop to consider what it may be possible to mean by 'spirit'. Similarly the 'cosmic reservoir' is nothing as yet, scientifically speaking, but an *asylum ignorantiæ*, even if we abstain from hastily evoking the Absolute to fill it; while the 'subconscious' also is an *ἀργὸς λόγος*, which does nothing to explain how it is that points could be noted and inferences correctly drawn, which escaped the conscious mind. Meanwhile there are the supernormal facts; not as numerous nor as certain as they might be made if only psychology would seriously concern itself with them, and philosophy would cease to content itself with a merely verbal and *a priori* notion of soul; but still more certain than any of the theories which are invoked as their 'explanation'.

F. C. S. Schiller.

Nietzsche, the Thinker: A Study. By William Mackintire Salter. New York: Henry Holt & Co. Pp. x, 539.

Mr. Salter may be congratulated on having produced the most elaborate and careful and best 'documented' study of Nietzsche in the English language, which is specially to be recommended to all who are at present tempted to let off 'poison gas' on the subject of Nietzsche, to regard him as a typical German philosopher, and to talk extravagantly about the 'Euro-Nietzschian War' (*sic*). Its aim is both apologetic and instructive. For Mr. Salter appears to think that the hostility to Nietzsche is intellectual in its origin and ascribable to sheer ignorance of his work. "Criticism of Nietzsche is rife, understanding rare," and he will be content if he can make it "a little more intelligent" (Preface). So he is very thorough and patient in quoting, referring, explaining—or perhaps (sometimes) explaining away—his author, in the hope that his sobriety and studious moderation of statement may convince the American public that Nietzsche is not after all wholly unworthy of the notice of the democratic man. This method of apologetic is no doubt effective in its way, and should go far to silence the ignorant critic. But its very virtues may render it less effective in winning disciples for Nietzsche. It is not a young man's book, but a mature and scholarly performance. For the young, however, the spell of Nietzsche lies largely in his picturesque extravagance, and his doctrine is often adopted *pour épater les bourgeois*. His strength lies in this, and in his literary quality; not in any systematic coherence of his thought or originality of his philosophic opinions, and the effect of Mr. Salter's treatment is rather to water down his hero. It is part of his method that he should be chary of criticisms and comparisons; and though it is no doubt best to explain Nietzsche by himself, he often leaves unsatisfied our curiosity about the logical affinities of Nietzsche's thought. For example, he quotes extensively for Nietzsche's theory of truth, and admits its connexion with pragmatism; but excuses himself from determining "how far a view of this sort resembles Pragmatism, I leave to those better acquainted with the latter to say" (p. 496). From the brother-in-law of William James this sounds queer; and he might at least have referred to the explicit discussion of this very

question in my *Quarterly Review* article (Jan., 1913), which he quotes (pp. 513, 514) on far less important points. In spite, however, of these defects of his qualities Mr. Salter has indisputably given us a most valuable study of a writer whose stimulus will always be felt by every moralist who aims at anything beyond a statement of the traditional platitudes.

F. C. S. SCHILLER.

The Dawn of Mind. By MARGARET DRUMMOND. London: Edward Arnold, 1918. Pp. vii, 176. Price 3s. 6d. net.

The author has produced an "introducion to child psychology" which will be welcomed by students. The book contains much information that is of value to parents and to all who are interested in modern methods of educating young children. It opens with an outline sketch of the nervous system. This is very slight in itself, but it may serve to indicate the importance of a knowledge of nervous conditions in studying mental development. Early consciousness is dealt with under the headings "absorption" and "expression". The former recounts the sensational experiences of the first year, the latter, the actions and emotions through which the baby brings himself into relation with his world. One could wish that the chapter which follows, dealing with the development of the fundamental concepts, form, colour, number, time, and space, were fuller. This is a topic on which information is badly needed. It would be a gain if in a later edition this chapter could be expanded at the expense of the one on "the unlucky baby". Admirable as may be the practical advice given under this title, the chapter as it stands interrupts the sequence of ideas, and would be better placed as an appendix or incorporated in the "Conclusion". "Memory, Imagination and Play" affords interesting material. Without being dogmatic the account given of these processes is very suggestive to the teacher. The same can be said of the chapters on reason and on language. The illustrations which have been brought together may not always justify the construction of a theory, but they cannot fail to interest the reader and help him in the study of child psychology.

BEATRICE EDGELL.

Essays in Scientific Synthesis. By EUGENIO RIGNANO. Translated by W. J. GREENSTREET. London: George Allen & Unwin, Ltd.; Chicago: The Open Court Publishing Co., 1918. Pp. 254. Price 7s. 6d. net.

This able and well-translated work consists of eight essays written with the same object and in the same spirit in various scientific periodicals and united in a volume published at Paris in 1912. M. Rignano understands by a "theorist" one who studies the logical structure of the methods used and the results arrived at by specialists. Such a function is that so successfully performed by mathematicians in physics, and here M. Rignano undertakes the task "of demonstrating the utility in the biological, psychological, and sociological field of the theorist, who, without having specialised in any particular branch or sub-division of science, may nevertheless bring into those spheres that synthetic and unifying vision which is brought by the theorist-mathematician, with so much success, into the physico-chemical field of science" (p. 5). The chapters are on "The Rôle of the Theorist in the Science of Biology and Socio-

logy," "The Synthetic Value of the Evolution Theory," "Biological Memory in Energetics," "On the Mnemic Origin and Nature of the Affective Tendencies," "What is Consciousness?" "The Religious Phenomenon," "Historic Materialism," and "Socialism". M. Rignano's book, besides being original and suggestive, is based on a thorough knowledge of an extensive literature, and the translation is as excellent a piece of work as a good translation should be.

J.

École Pratique des Hautes Études, Section des Sciences Religieuses. Annuaire, 1917-1918. *Hypostases Plotiniennes et Trinité Chrétienne.* By A. PICAVET. Paris: Imprimerie Nationale, 1917. Pp. 89.

M. Picavet's essay, which is written with his usual erudition and sound judgment, should be particularly welcome to the increasing number of serious students of Neo-Platonism. He rightly insists on the point that, in spite of the domination of Aristotelian logic in the Middle Ages, the metaphysical foundations of scholastic philosophy were always Neo-Platonic. In fact the way was prepared for the reception of Aristotle by the synthesis, already effected by Plotinus, of Plato with Aristotle. The essay traces the history of the influence of Plotinus on the development of Christian theology and philosophy from its earliest beginnings. The source of this influence was twofold. On the one hand, there was much in common between the Plotinian and the Christian ideals of life. Christians were spontaneously attracted to Plotinus because they found in his philosophy a reasoned exposition and defence of the ideal of life which they shared with him. On the other, there had from the first been two opposing parties in the Church, those who were in revolt against the whole Hellenic tradition and those who regarded it as a rightful heritage to be preserved and completed by the help of the Christian revelation. The second party, to whose triumph we owe the elaboration of theology, naturally felt free to borrow directly from the philosophy of the Neo-Platonists, the more as they mostly accepted the theory that Plato and the other great Greek thinkers had been themselves directly or indirectly indebted to the Hebrew Scriptures. M. Picavet shows by many examples how early the tendency to interpret Scripture by the aid of Neo-Platonic doctrine makes itself felt. There are one or two points on which a passing remark might be made. On page 6, M. Picavet quotes the well-known, "What else is Plato but a Moses speaking Attic?" without mentioning the fact, which of course he knows, that the author of the remark was neither Jew nor Christian, but the Neo-Pythagorean Numenius. I should like to take the opportunity of making a conjecture as to its point. It has often been said that Numenius was thinking of the cosmology of the *Timæus* and comparing it with the opening chapter of *Genesis*; more recently Prof. Burnet has suggested that what he had in view was resemblances between the "law of Holiness," and some of the early Attic law retained in the *Laws*. Is it not more probable that Numenius was thinking of the striking parallel between the "preambles to laws" in Plato (especially the great preamble to the whole legislation which fills the fifth book) of the *Laws* and the impressive rhetoric of *Deuteronomy*?

[The writer of this notice regrets that its concluding lines appear to have been lost in the Press and that he is unable to reproduce them from memory.]

A. E. TAYLOR.

Received also :—

D. H. Th. Vollenhoven, *De Wijsbegeerte der Wiskunde van Theïstisch Standpunt*, Amsterdam, Van Soest, 1918, pp. xv, 444.

Prof. James Ward, *Psychological Principles*, Cambridge University Press, 1918, pp. xiv, 478.

Prof. L. T. Hobhouse, *The Metaphysical Theory of the State*, London, George Allen & Unwin; New York, The Macmillan Co., 1918, pp. 156.

H. J. W. Hetherington and J. H. Muirhead, *Social Purpose*, London, George Allen & Unwin; New York, The Macmillan Co., 1918, pp. 317.

Prof. W. R. Sorley, *Moral Values and the Idea of God*, The Gifford Lectures at Aberdeen, 1914-15, Cambridge University Press, 1918, pp. xix, 534.

C. A. Strong, *The Origin of Consciousness:* An Attempt to Conceive the Mind as a Product of Evolution, Macmillan & Co., 1918, pp. viii, 330.

C. G. Jung and Others, translated M. D. Eder, *Studies in Word Association*, London, William Heinemann, 1918, pp, ix, 575.

Right Rev. J. E. Mercer, *The Problem of Creation*, London, Society for Promoting Christian Knowledge, 1917, pp. xiii, 325.

J. S. Mackenzie, *Outlines of Social Philosophy*, London, George Allen & Unwin, 1918, pp. 280.

Ernest Barker, *Greek Political Theory: Plato and his Predecessors*, London, Methuen & Co., 1918, pp. xiii, 408.

Aylmer Maude, *Leo Tolstoi*, London, Methuen & Co., 1918, pp. xi, 331.

Clement Webb, *In Time of War*, Oxford, Blackwell, 1918, pp. 105.

F. C. Constable, *Telergy*, London, Kegan Paul, Trench, Trubner & Co., 1918, pp. 113.

H. N. G. Newlyn, *The Relation between the Mystical and the Sensible Worlds*, London, G. Allen & Co., 1918, pp. 128.

VIII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. xxvii., No. 1. **W. H. Scott.** 'Consciousness and Self-Consciousness.' [Consciousness is not a relation (McGilvary, Woodbridge, etc.), but rather awareness: awareness of the object by the conscious self. Self-consciousness (as against James, Ward, etc.) is a state in which I am both subject and object and am conscious of myself as being both, while yet in the unity of my consciousness I am one undivided and indivisible self.] **A. K. Rogers.** 'Pragmatism *versus* Dualism.' [Certain pragmatic meanings have dualistic alternatives which are not intrinsically absurd. Knowledge means not only problem-solving but also static reference to objects. Consciousness is not only a 'knowledge' term, but may also imply a quality of 'awareness'. Experience means for the pragmatist either reality (in which case it says nothing) or else something psychological. Dewey, to avoid subjectivism, has left 'functional' psychology for 'behaviourism,' but the ambiguous term 'activity' cannot save his consistency.] **L. T. Troland.** 'Paraphysical Monism.' [Outlines a metaphysics on the lines drawn by Clifford; the substance of the universe is akin to consciousness, and the physical world is a conscious construct. Works out in some detail the functional parallel, static and dynamic, between the subjective or physical, and the objective or paraphysical or conscious.] Discussion. **W. M. Urban** and **J. E. Creighton.** 'Beyond Realism and Idealism *versus* Two Types of Idealism.' [If one accept all the values of realism (refusing false interpretation) and all the true values of idealism (eschewing mentalism) has one not transcended realism and idealism? No: because there is between the two a real difference of philosophical aim and method.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.—Vol. xxvii., No. 2. **A. W. Moore.** 'The Opportunity of Philosophy.' [Urges the democratisation of values: the adoption toward social, political, religious values of the same experimental attitude, their subjection to the same tests of international scrutiny and criticism, which we demand in scientific procedure.] **W. K. Wright.** 'The Relation of the Psychology of Religion to the Philosophy of Religion.' [Programmatic statement of the differences between philosophy and science, and of the profit to philosophy and psychology of religion accruing from discrimination and co-operation; indication of problems.] **R. W. Sellars.** 'An Approach to the Mind-Body Problem.' [The organism as such is the sole and proper subject of reference of all knowledge about it gained by observation and experiment, and consciousness is not alien to the organism. Rather is consciousness immanent, sustaining to the brain an internal and unique relation of real causality; and the function of consciousness is to guide and assist integration.] **E. E. Spaulding.** 'Proceedings of the American Philosophical Association; the 17th Annual Meeting, Princeton University, December 27 and 28, 1917.' Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

PSYCHOLOGICAL REVIEW. Vol. XXV., No. 1. **R. B. Perry.** 'Docility and Purposiveness.' [The docile organism has two springs of action: a selective, dominant, deep-seated, general and sustained propensity, which accounts for 'trying' and prescribes when this shall cease; and tentative, subordinate, superficial, transient and specific propensities, which are rendered hyperexcitable by the former, but are ordinarily released by sense-stimuli. The selected or 'eligible' propensity confirms, facilitates, and amplifies the selective.] **J. J. B. Morgan.** 'The Perception of Force.' [Dynamometric experiments confirm the view (Woodworth) that the perception of force depends on a number of partially correlated factors. For most subjects extent is a dominant factor, and time seems also to be important. Other and less closely correlated factors appear when the subject is prevented from using extent and time.] **A. P. Weiss.** 'The Tone Intensity Reaction.' [Experiments upon discrimination of intensities (pure tone of 256 vs.; six standard intensities; combination of paired comparisons with right and wrong cases). A theoretical discussion (based on Meyer's theory) resolves the reaction into two types of response: the serial and the comparison reactions.] Discussion. **R. V. Blair.** 'Thurstone's Method of Study of the Learning Curve.' [We cannot get correct values for the constants of the learning-curve, by the use of an equation, unless we know the true zero-point for practice.]—Vol. XXV., No. 2. **R. M. Yerkes.** 'Psychology in Relation to the War.' [Outlines the work of psychologists, with especial reference to the examination of recruits for elimination of the unfit, but with mention also of selection of personnel, problems of aviation, re-education, recreation, problems of vision and audition.] **H. C. Link.** 'An Experiment in Employment Psychology.' [First report on tests applied to inspectors and gaugers of shells.] **H. B. Reed.** 'Associative Aids: i. Their Relation to Learning, Retention and Other Associations.' [The relation of rate of learning to rate of forgetting depends on the character of the measure (the method of saving is misleading), the character of the learning (presence or absence of aids) and the character of the material. The aids (especially order and position, patterns, predication and rhythm) are responsible for only about 7 per cent., other reproductive tendencies (especially perseveration, contiguity, sensory similarity) for 93 per cent. of the errors in learning.] **S. Froeberg.** 'Simultaneous *versus* Successive Association.' [Repetition and extension of Wohlgemuth's experiments. Simultaneity is not necessary for association; an association may be formed between two experiences when the first has already passed out of consciousness at the moment of appearance of the second.] Discussion. **M. S. Case, J. E. Creighton,** and **M. W. Calkins.** 'Miss Calkins's Case of Self against Soul.' [(1) Plato has no separate metaphysical conception of the soul. (2) The self as universal subject cannot be known as object. (3) In psychological regard the self is properly called an object.]

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. XXIX., No. 1. **I. G. Campbell.** 'Manaism: a Study in the Psychology of Religion.' [Animism is the reading into things of the personal self, manaism the reading into things of the social self; the two concepts are complementary, and apparent priority of the one is merely emphasis due to circumstances. Mana experienced and ejected into an object is the basis of religion; mana experienced and stressed as part of the self gives rise to magic.] **A. Schinz.** 'French Origins of American Transcendentalism.' [Argues, following Girard, that the principal influence upon American philosophy before 1840 was French, and came by way of Mde. de Staël, Constant, de Gérando, Cousin, Jouffroy.] **W. D. Wallis.** 'Ethical Aspects of

Chilkat Culture.' [Notes, based on native information, on tribal organisation, slaves, family, education, position of women, disposal of dead, etc.] **M. E. Goudge.** 'A Qualitative and Quantitative Study of Weber's Illusion.' [Weber's illusion is found on twenty-four out of forty-two regions tested, and has the same form for all normal observers. It is conditioned primarily upon cutaneous sensitivity and continuous movement of the two-point stimulus. Equivalence-ratios, determined at points of change, correlate with reports of the illusory perception.] **G. J. Rich.** 'A Checking Table for the Method of Constant Stimuli.' **K. M. Dallenbach.** 'Dr. Morgan on the Measurement of Attention.' Book Notes. Vol. xxix., No. 2. **E. E. Cassel** and **K. M. Dallenbach.** 'The Effect of Auditory Distraction upon the Sensory Reaction.' [A distractor may inhibit and lengthen reaction, or facilitate and shorten, or become habitual and have no effect. The result depends upon the temporal relations of the distractor and upon the conscious attitude of the reactor during distraction.] **G. S. Hall.** 'A Medium in the Bud.' [Account of incipient mediumship, at first attributed to an outgrowth of adolescent imagery representing a defensive reaction upon unfavourable home-surroundings, but later found to have a definitely erotic basis.] **P. Blanchard.** 'A Psycho-analytic Study of Auguste Comte.' [Comte is essentially an introvert; but three times his unconscious emotional life (Œdipus complex) came to the surface. In the final crisis, the extrovertive functions were so reinforced as to remain in power (shown by Comte's exaggeration of the affective element and by his religious doctrines).] **M. Luckiesh.** 'On "Retiring" and "Advancing" Colours.' [In general, blue retires and red advances. The different refractive indices of the eye-media for radiant energy may be in part responsible.] **E. C. Tolman** and **I. Johnson.** 'A Note on Association-time and Feeling.' [Names of simple sense-qualities, if unpleasant, lengthen reaction-times as much as words of deeper emotional significance. Women are more susceptible than men; and with women, pleasant stimulus-words may perhaps shorten the association-times.] **M. Schoen.** 'Prolonged Infancy, its Causes and its Significance: Some Notes on Mr. Fiske's Theory.' [As intelligence replaced prowess, and as the environment became accordingly simplified, the young found less and less need for immediate alertness, and infancy was accordingly prolonged.] **E. E. Cassel** and **K. M. Dallenbach.** 'An Objective Measure of Attributive Clearness.' [Both rate and degree of precision of the simple sensory reaction are reliable means of determining degree of clearness.] **S. C. Pepper.** 'What is Introspection?' [Critique of Titchener. Introspective method recognises no innate fitness of data; objective method, a later growth, insists on the natural superiority of vision.] **C. A. Ruckmich.** 'A Bibliography of Rhythm: Second Supplementary List.' **E. B. Titchener** and **E. G. Boring.** 'Minor Studies from the Psychological Laboratory of Cornell University.' **H. D. Williams.** 'XL. On the Calculation of an Associative Limen.' [Argues tentatively that the mnemometric function is the *phi-gamma*, and that the effective condition of association varies with the logarithm of the number of repetitions.] **M. Kincaid.** 'XLI. An Analysis of the Psychometric Function for the Two-point Limen with Respect to the Paradoxical Error.' [The occurrence of the paradoxical error may indicate the presence of two antagonistic functions. If the normal function is the *phi-gamma*, the residual values constituting the second, dispositional or impressional function, may be obtained by mathematical analysis.] Book Notes. Vol. xxix., No. 3. **P. T. Young.** 'An Experimental Study of Mixed Feelings.' [Mixed feelings are reported rarely (71 in 2212 reports) and often doubtfully; there are also very large individual differences. The

report involves a confusion between the 'meaning' of pleasant or unpleasant (ascribed to an object) and effective experience proper. The meaning-error is favoured by intellectualisation, unpleasant mood, lack of psychological training, suggestion, and habituation to a form of report. Normal experiences which resemble mixed feelings are alternation, affective doubt, interruption of an established mood, awareness of affective object breaking in on a contrary affective disposition.]

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. XV., 1. **C. A. Strong.** 'Fate and Free Will.' [To show that determination does not entail fatalism.] **A. K. Rogers.** 'The Philosophy of Loyalty.' [A searching criticism of Royce, showing that if 'loyalty' is not to be a purely formal principle, settling no "questions of conscience and of conflict," it has to be interpreted as mere conformity to established social conventions for the improvement and reform of which it can make no provision. Nor can we do without some further independent standard of 'good' in order to condemn loyalty to a *bad* cause. It is shown finally that the ethical value in Royce's formula is better expressed by demanding absorption in interesting and satisfying *work*, which would naturally entail both self-expression and self-satisfaction.] XV., 2. **J. Dewey.** 'Concerning Alleged Immediate Knowledge of Mind.' [Criticises the 'naive introspectionism' of supposing that "personal events have a nature or meaning which is one with their happening" so that a man cannot be unaware of his motives.] **C. E. Ayres.** 'The Epistemological Significance of Social Psychology.' ["Social psychology most certainly is not limited to the study of the more elementary expressions of the social nature of mind . . . the new epistemology—social-psychology—is already in process of becoming our chief instrument of control over social evolution."] **J. E. Downey.** 'The Proof Reader's Illusion and General Intelligence.' [It "correlates with general intelligence to a considerable degree," on the basis of experiments with a class in psychology.] XV., 3. **H. T. Costello.** 'Hypotheses and Instrumental Logicians.' [Asks Dewey to be more explicit in his account of the function of hypotheses, to distinguish between hypotheses which are verified directly and indirectly, to remember "the immense importance of understanding comparison," and "the social aspect of thinking," *i.e.*, understanding language and communicating, and to bring out "the strategic importance of the great laws of science".] **G. A. Tawney.** 'Vox populi, Vox Dei.' [It "remains a false doctrine, until people is equated with humanity".] **E. S. Brightman.** 'Some Remarks on "Two Common Fallacies on the Logic of Religion".' [*Cf.* W. R. Wells in xiv., 24. Criticises the assumptions that religious beliefs are unverifiable, and that because mystical experience is from 'below' it cannot be influenced from 'above'.] **J. S. Moore.** 'The Validity of Religious Belief.' [Also a criticism of Wells's paper—for identifying empirical verification with verification in terms of sense-experience.] XV., 4. **W. T. Bush.** 'Value and Causality.' [Instrumentalism tends to make 'value' a synonym for 'use'; but there are also intrinsic values which are 'good' without being 'good for,' and these should not be overlooked.] **A. I. Gates.** Report on the Twenty-sixth Annual Meeting of the American Psychological Association. XV., 5. **T. de Laguna.** 'On the Distinction between Primary and Secondary Qualities.' [Under the influence of Berkeley the reaction against this distinction has gone too far. Admitting that "things, their secondary qualities and a fortiori their primary qualities, are fictions," that "the empirical demonstration of what is or is not given in experience" is difficult or even impossible and that "the very distinction be-

tween the given and the inferred or constructed" may not be altogether valid, we must remember that "all physical and chemical *measurements* are in mechanical terms, whether or not physics and chemistry are ultimately reducible to mechanics". Hence "objective colours, tones, etc., are measurable only in terms of the primary qualities so-called".] **D. W. Pratt.** 'Concerning the Nature of Philosophy.' ["Philosophy is identical with science itself"—in general, in which form no science possesses it. "Thus any science is fundamentally scientific only when it is philosophical."] xv., 6. **W. T. Bush.** 'An Apology for Tradition.' [A meditation on German philosophy à propos of Boutroux's 'Philosophy and War'.] **D. T. Howard.** 'The Pragmatic Method.' [À propos of Dewey's essay in *Creative Intelligence*. It is objected that "pragmatism cannot do full justice to the mental and spiritual life of man" because it is restricted to the methods of biology.] **E. C. Parsons.** 'Ceremonial Impatience.' [An anthropological study of rites intended to accelerate some desired event, ending up with an application to some of the catch-words of modern politics.] xv., 7. **B. H. Bode.** 'Why do Philosophical Problems Persist?' [A review of Miss Calkins's *The Persistent Problems of Philosophy*—which answers 'because they need to be redefined from generation to generation'.] Report on the 17th Annual Meeting of the American Philosophical Association by I. Edman, W. Fite, H. Parkhurst. xv., 8. **A. G. A. Balz.** 'Dualism and Early Modern Philosophy,' I. [To show, historically, that modern philosophy inherited a dualistic psychology which it has never been able to shake off. The present article is largely concerned with Thomas Aquinas's version of the Aristotelian dualism.] xv., 9. **A. G. A. Balz.** 'Dualism and Early Modern Philosophy,' II. [Concludes that "when we feel compelled to prove the existence of an external world, while the scientist and the man in the street alike assume its existence . . . we cannot resist the conclusion that there is something artificial and spurious in the problems generated by the dual view of existence".] **H. Cary.** 'Estimation of Centidiurnal Periods of Time: an Experimental Investigation of the Time Sense.' [A humorous account, in technical jargon, of the way the speakers at the 1917 Meeting of the American Psychological Association exceeded their allotted time. *E.g.*, one conclusion drawn is that "accurate appreciation of time diminishes directly with age and psychological training and inversely with the intelligence quotient I.Q.".] xv., 10. **J. Dewey.** 'The Objects of Valuation.' [In reply to R. B. Perry and W. T. Bush, endeavours to make clear (1) that "propositions *about* values already given *as* values" are not the valuations described as 'practical judgments,' (2) that the *prizing* of a recognised value is to be distinguished from "the cognitive act of valuation" which determines a value, and (3) that there are constantly occasions for *doubting* apparent or alleged values, and that these lead to revaluations and real value-judgments.] **H. R. Marshall.** 'Behaviour.' [Contends that to abstract from consciousness in accounting for human actions is to despair of psychology.] **C. J. Keyser.** 'Doctrinal Functions.' [Starts from Russell's notion of a propositional function which is neither true nor false until values have been assigned to its variables, and points out that values may always be given which make nonsense of the function and hence are to be called *inadmissible constants*. Admissible constants are divided into *verifiers* and *falsifiers*: the former "*satisfy* it and are called the *values* of its *variables*. Thus the values of a given function are the true propositions that are derivable from it by replacing its variables by admissible constants." Applying these distinctions to "the postulational method of founding and constructing mathematical sciences," it appears that as "any postulate-system contains one or more undefined terms and

at least one of these denotes an *element*," which gives it the appearance of having a definite subject-matter, the system will require interpretation. In this process "the *rôle* of the undefined terms is the *rôle* of variables"; hence "a postulate system is not a system of propositions, as it is commonly said to be, but it is a system of propositional functions". It should be called therefore a 'doctrinal function,' and it is shown that "the number of values of any doctrinal function is equal to any given transfinite cardinal number. It is a corollary that "Hilbert's Foundations of Geometry is not a geometry at all, nor is it any other doctrine; it is a doctrinal function having an infinitude of values, some of them geometric, some of them algebraic, some of them neither the one nor the other".] **E. B. McGilvary.** 'Error in Professor Holt's Realism.' [The doctrine that 'Error is contrariety or contradiction that has got into consciousness' combined with that that 'Nature is a seething chaos of contradictions,' should compel Holt to call an 'error' much that no one dreams of calling it, *e.g.*, a disease.] xv., 11. **W. Riley.** 'Two types of Transcendentalism in America.' [To prove that "New England transcendentalism was evidently not made in Germany, nor France, nor Britain". It was "a native plant, fertilised indeed from abroad, but nevertheless rooted in the local soil".] **A. A. Merrill.** 'Free Will.' [If cause and effect means a succession in time which can be repeated, there can be free will because there is no (exact) repetition.] **R. H. Dotterer.** 'The Definition of Infinity.' [Criticises the 'new infinite' of Dedekind and Cantor as doubly ambiguous. (1) Two infinite series do not stand *merely* in a one-to-one correspondence, but also in an infinity of others. But *unless* they do, the new definitions of 'similarity' and 'equality' break down. (2) The 'new infinite' is only the old in disguise, for that also involved an inexhaustible series and the possibility of a one-to-one correspondence (or of any other). Hence it retains also the old difficulties. Only they are hidden away in its definition. Thus the infinite series of cardinal numbers cannot be called a 'system' or a 'totality' without assuming a realised infinite. If 'totality' is defined to mean *determinable* only, the 'new infinite' cannot claim existence any more than the old. Hence "it does not help in the solution of any of the problems of philosophy or theology".]

The International Journal of Ethics. January, 1918. Vol. xxviii., No. 2. **A. K. Rogers.** 'The Principles of Distributive Justice.' [Discusses various principles for an equitable distribution of goods. Existing possession should be respected only in so far as general stability is expedient. "Equality," when strictly interpreted, is unfair, and proportioning of reward to effort is impracticable. "The right to possession of one's own produce" is unsatisfactory owing to the complications introduced by co-operation and to the element of luck in competition. The writer concludes that division cannot be based solely on a principle of abstract justice but is "a matter of expediency—of satisfying the various classes involved to a degree that will make them willing to co-operate for the best interests of all".] **Herbert L. Stewart.** 'The Alleged Prussianism of Thomas Carlyle.' [Carlyle taught not that Might is Right but that Right is Might or will become so eventually. This view also shown in his belief that great social convulsions have at bottom just demands. As to Carlyle's attacks on democracy, he would have an autocracy organised for social good not for war—the ideal of Prussian Militarism.] **Aldred H. Lloyd.** 'The Glory of Democracy—Poetry, Comedy, and Duty.' [The progress of democracy demands the type of vision implied in poetic imagination, and this involves humour; and vision and cheerfulness mean duty.] **Kia-Lok Yen.** 'The Bases of

Democracy in China.' [With a view to discovering how various Chinese institutions have favoured the organisation of a democratic government the author discusses the family, the "greater family," village organisation, the four class system (scholars, farmers, artisans and merchants), the mutual loan association, guilds and some political institutions. "The doctrine that government is for the people and by the people is as old as legendary China itself." Contact with the West has intensified the feeling of nationality.] **Wilbur M. Urban.** 'Tolstoy and the Russian Sphinx.' ["The mystery of Tolstoy and the mystery of Russia are one." The idea of the "simple peasant" is overdone; while we neglect, both as regards Tolstoy and Russia as a whole, that "temperamental nihilism which so often constitutes the Russian answer to the riddle of life".] **John M. Mecklin.** 'The Tyranny of the Average Man.' [A discussion of the evils and advantages of democracy, which involves a mental despotism. The average man is conventional, prejudiced, afraid of new ideas and lacking in imagination, but his moral judgments are sounder than those of his intellectual superiors.] **James Lindsay.** 'Ethical Christianity in Europe.' [Attempts to refute Bertrand Russell's assertion that the influence of Christianity has decayed rapidly in Europe during the last century, by showing the low level of morals and religion a century ago, and the deep if hidden influence of Christianity at the present day—an influence which cannot be measured by statistics.]

British Journal of Psychology. Vol. ix., Part 1. December 1917. **Shepherd Dawson.** 'The Theory of Binocular Colour Mixture, II.' [A critical survey of the various theories of binocular colour mixture with a detailed exposition of the attention theory.] **M. E. Bickersteth.** 'The Application of Mental Tests to Children of various Ages.' [A very extensive research, dealing with 2500 school children. Specific mental abilities found to vary much more with different individuals of the same age than between the averages of individuals of different ages. Little correlation shown between motor ability and general mental ability. Only a low correlation between age and reasoning power as shown in the "analogies" test. Town children excelled in tests involving speed and in the reasoning test, country children being invariably superior in memory tests.] **Cicely U. Parsons.** Children's Interpretations of Ink Blots: A Study in Some Characteristics of Children's Imaginations.' [Blots apperceived as living beings more frequently than as inert objects. Boys of seven have ideas connected with landscape more frequently than is the case with girls.] **Ida B. Saxby.** 'Some Conditions Affecting Growth and Permanence of Desires.' [An extensive research with school children, some of whom were given special courses of training in observation, neatness, etc. Special exercises in "quick perception" did not result in any general improvement in "taking things in at a glance". Evidence is given as to the development of "ideals" of neatness, of being observant, etc., their influence by special exercises, their dependence on the teacher concerned and on suggestion by companions.]

Revue de Métaphysique et de morale. Sept., 1917. **Ch. Dunan.** 'Pour le progrés de la métaphysique.' [Sharply distinguishes science, which uses understanding and deals with existence, from metaphysics, which uses reason and deals with being. The Greeks and hardly anyone since them understood this. (Good rhetoric and little else.)] **G. Morin.** 'L'individualisme du Code Civil. [Deals with the work of recent French jurists, and especially M. Demogue, on the gradual breakdown of the individualism of the *Code Civil*. The political theory is traced to Grotius,

Rousseau, and Adam Smith ; it is summed up by Kant in the two principles of the independence of individuals and their self-determination. The former principle conflicts with economic interdependence ; the code regards all economic relations as contracts between independent individuals, but this has become a mere fiction with the development of natural and legal monopolies characteristic of large-scale production and distribution. The law tries to meet the new conditions by imposing rules on the monopolist or by allowing combinations among workmen and consumers. The latter were at first treated as voluntary contracts among their members, but it has been found necessary to legalise collective bargaining and to make such bargains obligatory on all members of the contracting groups. The Syndicalists want an 'individualism of groups,' but schemes for profit-sharing and for the establishment of consultative committees of workmen in factories point in a different direction. Trusts and cartels are still in theory forbidden by § 419 of the Code ; in practice relaxations have constantly to be made in their favour on various and often inconsistent pretexts. Seeing the economic efficiency of large-scale production it were better to abolish § 419 and to deal with the dangers of monopoly either by a legal fixing of prices and conditions or by nationalisation. The attempt to force all economic relations into the mould of contracts should be frankly abandoned ; it is better to compare the relations of a railway company and its travellers to those of a public authority, making regulations for the use of roads. The state must then see that the regulations made are reasonable. We must likewise recognise that the decisions of a majority in any association are binding on all its members ; the sole duty of the law is to see that the decision has been regularly taken and that it does not infringe the public interest. (A valuable article).] **L. Rougier.** 'De la nécessité d'une réforme dans l'enseignement de la logique.' [The teaching of logic should be brought into line with modern knowledge. (1) The invalidity of subalternation and of syllogisms like Darapti should be recognised. (2) It should be shown that there are valid and valuable types of reasoning beside the syllogism and the usual immediate inferences. (3) There is no such thing as inductive *reasoning*, and the distinction between deductive and inductive science is not a happy one. (4) The distinction of analytic and synthetic is merely psychological. (5) Indefinables and indemonstrables are so only in relation to a given system ; the ultimate system being the notions and primitive propositions of formal logic. (6) The traditional logic gives a most inadequate account of definition, neglecting definition by postulates. These defects hide the nature of pure and applied mathematics and give rise to apparent antinomies. (All quite true : but who will teach the examiners ?)]. **E. Cramussel.** 'Pour un enseignement philosophique nouveau.' [Recommends a limitation in the range of subjects studied, and that each professor should confine himself to subjects on which he is really an expert. ('Recalls the worst excesses of the French Revolution!').] **R. H.** 'Réflexions sur la guerre expiatrice.' [The war a conflict between opposite ethical theories, and inevitable and incapable of compromise. The evils of war may be regarded as just punishments on communities for actual sins or for culpable negligence. (Was Belgium more sinful than Holland ?).]

"Scientia" (Rivista di Scienza). Series ii., Vol. xxiii., April, 1918. **G. Castelnuovo.** 'Questioni di metodo nel calcolo delle probabilità.' **Abel Rey.** 'La renaissance du cinétisme. Ière Partie : La réaction et l'échec du positivisme pur.' [After the defects of the ancient kinetism had been recognised, a state of thought arose, towards the end of the nineteenth century, which may be characterised by its opposition to

mechanism and by its pragmatic and utilitarian conception of scientific truth. Among physicists proper, this state of thought led to the use in thought of mechanical models; but with Mach, Kirchhoff, Hertz, and Duhem, for example, we see more pronounced philosophical tendencies (*cf.* the author's *La Théorie de la physique chez les physiciens contemporains*). Rise and fall of 'energetics' and renascence of kinetism: physics again comes into contact with reality. A continuation of this article will show how the intuitive nature of science has led to the re-establishment of physical realism.] **Yves Delage.** 'Le rêve et la condition psychique du rêveur.' [Summary of his forthcoming *Psychologie de rêve*. There are three domains in the analysis of dreams, in each of which the psychism of the dreamer plays a different part: (1) the inanimate objects and the actors in the dream; (2) The play of the actors (including the dreamer); (3) The stream of thoughts and judgments on what goes on. Appendix of descriptions of two dreams.] **H. Westergaard.** 'L'économie politique ancienne et nouvelle.' **T. B. Napier.** 'The Effect on British Opinion of the Russian Revolution and the American Intervention.' Book Reviews. General Review. **F. Bottazzi.** 'Les problèmes modernes de la nutrition.' Review of Reviews. Chronicle. French translations of articles in Italian and English. Vol. xxiii., May, 1918. **Abel Rey.** 'La renaissance du cinétisme. IIème Partie: Le nouveau cinétisme et sa position philosophique.' [Nowadays it seems that all physicists agree that the criticisms of pure positivism have resulted in re-establishing contact between the physical and the real, although they do not all conceive the real in the same way. In this second part, there is a sketch of in what this re-establishment consists, and of its philosophical value and significance.] **Filippo Bottazzi.** 'Le attività fisiologiche fondamentali. Quarto Articolo: Il metabolismo materiale. Parte Ia: Definizioni. Tipi fondamentali e velocità delle reazioni metaboliche.' **Edmond Perrier.** 'L'origine des embranchements du règne animal. Ière Partie: Les variations d'attitude chez les animaux actuels.' **W. R. Scott.** 'Nationality and Cosmopolitanism.' **Ch. Guignebert.** 'La question de Pologne et la Papauté.' Critical note. **Eugenio Rignano.** 'La signification des rêves.' [On J. H. Coriat's book on *The Meaning of Dreams* (London, 1916), 'which gives an exposition of, and illustrates, in a clear and synthetic form, the theories of the psycho-analytic school. . . . If there is anything true and valuable in these theories, it is so disfigured by the one-sided and extravagant character of the applications that one feels tempted to reject the whole thing.'] Book Reviews. General Review. **G. Stefanini.** 'Les récents progrès des études paléogéographiques. Ière Partie: Les études de M. Schuchert.' Review of Reviews. Chronicle. French translations of articles in Italian and English. Vol. xxiii., June, 1918. **J. Rey Pastor.** 'La systématisation de la Géométrie au moyen de la théorie des groupes.' **Filippo Bottazzi.** 'Le attività fisiologiche fondamentali. Quarto Articolo: Il metabolismo materiale. Parte IIa: Metabolismo degli alimenti organici; teorie del metabolismo.' **Edmond Perrier.** 'L'origine des embranchements du règne animal. IIème Partie: Le rôle qu'y ont joué les attitudes.' **Sir W. J. Collins.** 'The Semeiology of the World-Wide War.' **Jovan Cvijić.** 'Unité ethnique et nationale des Yougoslaves.' Critical note. **Eugenio Rignano.** 'Psychologie et psychiatrie.' [On E. Tanzi and E. Lugano's *Trattato delle malattie mentali*, 2nd ed., Milano, 1914 and 1916.] Book Reviews. General Review. **G. Stefanini.** 'Les progrés récents des études paléogéographiques. IIème Partie: Les études paléobotaniques de M. Berry.' Review of Reviews. Chronicle. Index to vol. xxiii French translations of articles in Italian and English.

IX.—NOTES.

M. JULES LACHELIER.

It is with deep regret we have to record the death of M. Jules Lachelier, a veteran philosopher who possessed a place peculiarly his own in the affection and esteem of his colleagues and pupils. Born at Fontainebleau in 1832, he was educated first at Versailles, then at the Lycée Louis-le-Grand (Sainte-Barbe) ; next he was a student at the Ecole normale. He was professor of Logic at Toulouse (1857-58), and then at Caen (1858-61). In 1864 he became a professor at the École normale where he taught philosophy for eleven years. He became Inspecteur de l'académie de Paris in 1875, and Inspecteur Général de l'instruction publique in 1879. He was a member of the Institute, and "officier" of the Legion of Honour.

M. Lachelier published very little. There only remain two small volumes ; the first contains his thesis for the doctorate in 1871, —"Du fondement de l'induction," an article entitled "Psychologie et Métaphysique," and "Notes sur le pari de Pascal" ; the second is entitled "Études sur le syllogisme". He was above all a teacher,—"son œuvre, ce sont ses élèves". His method did not consist in serving up a ready-made philosophy, but in developing in his pupils the need and the power of thinking for themselves, and so he remained for them "the Master," however much their subsequent thought diverged from his.

The philosophy of M. Lachelier was largely inspired by Kant and Leibniz. It is sometimes (wrongly, I think) described as eclectic. It is only eclectic in the sense in which that term may be applied to any philosophy which is not uninformed of the past, and as a matter of history the influence of Ravaisson and Lachelier made a clear break with the school of Cousin. A brief statement of the chief positions maintained in M. Lachelier's thesis on Induction may give some idea of his views.

In the process of induction we somehow pass from the knowledge of facts to the knowledge of their laws. We know that the phenomena before our eyes are related in certain ways, but can we say that they must be related always and everywhere in the same way ? And if we can, on what principle does our procedure rest ? Laws are not a logical result of the mere enumeration of facts. For we extend to the future, laws which, on that supposition, only represent the sum of past facts. Again, on a single well-ascertained fact we establish a law which applies both to the past and the future. Further, each fact is contingent, while a law is the expression of a necessity. Induction cannot be based on the purely formal principle of identity which only allows us to say in one shape what we have already said in another. What is needed is a principle in some sense material, in order to add to the facts perceived the universality and necessity which are essential to laws.

M. Lachelier disapproved of Reid's formulation of the inductive principle : "In the order of nature that which will happen will probably resemble that which has happened in similar circumstances". On the contrary, it is quite certain that what has happened in certain conditions

will happen again when all these conditions are again conjoined. Unless something is certain nothing can be probable. In practice induction is always subject to error, but in respect of authority (*en droit*) it is infallible absolutely.

In the notion of laws of nature two principles are involved; in virtue of one, phenomena form series in which the existence of the antecedent determines that of the consequent; in virtue of the other, these series in turn form systems in which the idea of the whole determines the existence of the parts. Hence induction rests on the double principle of efficient and final causes. Knowledge does not begin with generalities and abstractions, its origin must be sought in one or more concrete and individual acts, in which thought constitutes itself by seizing reality immediately. Either science is a dream, or its principles are the expression of a fact, and that is the fact at once of existence and of thought, wherein the principle of induction must be found, and not in an original axiom.

What is the first step by which thought enters into relation with reality? M. Lachelier found in contemporary philosophy two conceptions of reality. (*a*) Reality consists entirely of phenomena, and all knowledge is, in the last analysis, sensation. (*b*) Reality is somehow shared between phenomena and certain entities inaccessible to our senses, and in this case knowledge begins at the same time by a sense-intuition of phenomena and a sort of intellectual intuition of these entities. Hence it is necessary to enquire whether the principle of induction can be demonstrated from experience, or from the intuition of things-in-themselves. In case of failure a third way must be sought.

Mill's is chosen as the empirical proof on the ground that nothing better can be done in the same way. It is rejected because it can only refer to the past, and so could only be universal and certain if there were no more facts to come and no more inductions to make. Nor is it the same thing to observe a phenomenon, and to judge that the same phenomenon will be reproduced in the same circumstances.

The upshot of Mill's system is to make science impossible. Because we have acquired the habit of associating in a certain order the images of our past sensations, does it follow that our future sensations must follow one another in the same order? "What empiricism calls our thought in opposition to nature is merely a collection of weakened impressions which outlive their own powers: and, to seek the secret of the future in what is only the empty image of the past, is to undertake to guess in a dream what must happen to us when awake" (p. 25).

The school of Cousin formulates the principle of induction by saying that there is order in nature, but fails to give a precise idea of this order. Metaphysics cannot be founded on "the principle of substance," and "the principle of cause," for if the knowledge of things-in-themselves is intuitive, it cannot assume the form of a principle, and if it is not, it has no objective value.

These two ways having failed, what is the third? Besides phenomena and entities, distinct alike from phenomena and thought, there only remains thought itself. In thought and its relation with phenomena, the foundation of induction must be sought. Our highest knowledge is neither sensation nor intellectual intuition, but reflexion. Such a view is the only possible one, the only one by which we can understand our ability to know *a priori* the objective conditions of the existence of phenomena, for the conditions of their existence are the very conditions of the possibility of thought.

The inductive principle implies both the serial sequence of phenomena and their union in a system or systems, and it is necessary to show that

without these thought is impossible. The conditions of the possibility of thought are two: (*a*) the existence of a subject which distinguishes itself from each of its sensations, otherwise sensations and phenomena would mingle, and there would be nothing that we could call either ourselves or our thought; (*b*) the unity of this subject amid the diversity of sensations simultaneous or successive.

The subject is not a substance nor an act of will, nor is its unity that of a thought reflected on itself. The essential difficulty is that thought can only exist if sensations are united in a subject distinct from them, while this distinctness itself seems to make the subject incapable of serving as the ground for such unity. From this difficulty M. Lachelier saw only one way of escape—to admit that the unity of the subject is not the unity of an act but of a form. The natural relations of our sensations one to another can only be those of the phenomena to which they correspond, and the problem of the unity of sensations in a single thought is the problem of the union of all phenomena in a single universe. Knowledge and existence can only be explained if they form in reality one thing.

All phenomena are movements, and everything in nature must be explained in mechanical terms "for the mechanism of nature is, in a world subject to the form of time and of space, the only possible expression of the determinism of thought" (p. 56).

Sounds and colours and secondary qualities in general are simple appearances which only exist in our senses. The perception of these qualities is the obscure perception of certain movements. Movement is the only real, because it is the only intelligible phenomenon.

If nature is a mechanism what becomes of the spontaneity of life and the liberty of human action? Is the harmony of functions in plants and animals the result of the general laws of movement or of an "agent spécial" distinct from the organism, and subject only to teleological laws? There is no ground for the latter assumption, it is very difficult, and ends by being a mechanism inside a soul. The actions of men are no exception to the universal mechanism. A liberty of indifference would be fatal all round; man is a moral mechanism determined by motives. The law of efficient causes, however, only relates each movement to a preceding one, and does not explain the co-ordination of several series of movements. The possibility of thought rests on the unity of its object, and this unity consists of the *liaison mécanique* of causes and effects. Why or how add a second unity to this?

The first unity is incomplete and superficial; it is not a unity of the things themselves, but of the series of places which they occupy in time, and the movement of thought which passes without interruption from one to the other. In short, it is a form; the content comes as sensation. Thought based on mere mechanism would only be an empty form, the abstract possibility of thought. "We must then find a means of making at the same time thought real and reality intelligible; and this means can only be a second unity which shall be to the matter of phenomena what the first is to their form, and which shall allow thought to seize by a single act the content of several sensations" (p. 77). Hence finality, by which alone this is possible, is the only complete explanation of thought and of nature. It is on the distinction of our faculties that the opposition of concrete and abstract mechanism and finality rests. "Thought which could forget itself in order to lose—or rather, wholly find itself in things, would know no other law than harmony, no other light than beauty" (p. 86).

Finality is "the hidden spring of mechanism". "Every phenomenon, or, what amounts to the same thing, every movement is the product of a

spontaneity which directs itself towards an end; but a spontaneity which directs itself towards an end is a tendency, and a tendency which produces a movement is a force: every phenomenon is therefore the development and manifestation of a force" (pp. 87-88). M. Lachelier thus passes in his argument through *un idéalisme matérialiste* as a temporary stage to *un réalisme spiritualiste*, as the true philosophy of nature. He himself considered his philosophy to be a Kantian Idealism, and perhaps scarcely realised how far he had gone beyond the sources of his inspiration. Short as his works unfortunately are, they serve to reveal a perfect style, and a subtle clearness of thought hard to match, even in French philosophy.

ARTHUR ROBINSON.

NOTES ON ZENO'S ARGUMENTS ON MOTION.

THE following notes have to do with two points. The first is to call attention to an argument used by Mr. R. A. P. Rogers; the second is to bring out the force of some remarks attributed to the shade of Zeno on pages 52-55 of the number of MIND for January, 1916, and which do not seem to have been expressed clearly enough.

In 1910 Mr. R. A. P. Rogers published an interesting paper 'On Transfinite Numbers, and some Problems Relating to the Structure of Actual Space and Time' (*Hermathena*, vol. xv., 1910, pp. 397-415). The most original part of the paper begins on page 409 and is an argument for the compactness of both space and time from the possibility of what the author calls 'uninterrupted' motion at different velocities. 'Uninterrupted' motion of a particle is defined as 'the occupation in spatial order of different positions in different instants'. It follows that if the number of points in a spatial distance is finite, uninterrupted motion is possible with only one velocity, and this is the maximum velocity for any kind of motion. As Mr. Rogers remarked to me in a letter and in a note written in the margin of a copy of his above paper, this conclusion would be in agreement with the views of certain modern physicists that there *is* a maximum velocity, the velocity of light.

The argument that, if a space and time were composed of a finite number of elements, only one velocity would be possible was really that of Zeno's fourth argument, and was simplified by Mr. Russell on pages 134, 177, and 178 of his 'Lowell Lectures'. The object of the shade of Zeno at the end of the paper quoted above was to show that mere compactness does not allow us to refute Zeno's argument of the Arrow, whereas apparently Mr. Russell thought that compactness alone was necessary. In fact, even if space and time were composed of certain aggregates which are compact and either enumerable or of the same cardinal number as the continuum, but of a certain unclosed type described on page 53 of the paper, the Arrow-argument would hold quite rigidly and thus no motion would be possible.

The argument in the last section of the paper was simply to show that unaided common sense could easily agree to the logical impossibility of motion even in the apparently closed aggregate of points which we call space. We must, I think, admit the possibility that some of the motions which go on around us are, as a matter of fact, interrupted, and so we certainly cannot decide by logic whether space and time are compact and closed or not. But what logic enables us to do is to conclude that the possibility of uninterrupted motion implies not only the compactness of space and time, but also that they form continua.

The fallacious argument on page 54 makes use of, among other things, the

fact that a transfinite ordinal number (of the second class) of lengths may have a total length which is as small as we please. The only connexion which the transfinite cardinal and ordinal numbers have with *distances* seems to be this: Whereas we can always find a *finite* number such that that number of intervals *equal in length to one another* exceeds any given length, and no finite number of certain intervals (not all of equal length) can produce an interval whose total length is greater than an assigned length; it is always possible to find an ordinal of the second class such that that number of *any* given selection of intervals forms an interval of length greater than any assigned one, and thus the cardinal number Aleph-one of *any* intervals cannot be contained in any line however long.

PHILIP E. B. JOURDAIN.

NOTE ON C. D. BROAD'S ARTICLE IN THE JULY "MIND".

Mr. Broad's very interesting article in the July MIND on "A General Notation for the Logic of Relations" attributes to me (for what reason I cannot guess) a number of notations employed in *Principia Mathematica*. As far as my memory serves me, all these were invented by Dr. Whitehead, who, in fact, is responsible for most of the notation in that work. My original notation, before he came to my assistance, may be found in Peano's *Revue de Mathématiques*, vols. vii. and viii.

BERTRAND RUSSELL.

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—A SKETCH OF THE PHILOSOPHY OF RELIGION, WITH ILLUSTRATIONS OF CRITICAL MONISM.

By Douglas Clyde Macintosh.

Philosophy differs from science as wisdom differs from information. Science is systematised information. In its most characteristic form it is description of fact. Abstract sciences, *e.g.*, mathematics, furnish information as to what *would be*, if certain assumptions were according to fact. Normative sciences, *e.g.*, economics and ethics, furnish information as to what *must be*, if certain ends are to be attained. Fundamentally, all is information, description.

Philosophy, as we have indicated, is more than science, as wisdom is more than information. But a sound philosophy will make use of science, just as it is the part of wisdom to make use of available and relevant information. And yet, however the sciences may develop, there will always be a place for wisdom in the estimation of ideals and values, and in the attempt to fathom the nature of man and of the universe.

All philosophy, then, may be divided into two main parts, criticism, or the philosophy of values, and metaphysics, or the philosophy of reality. Some of the branches of critical philosophy are relatively simple, dealing, as they do, with the nature of ideals. Philosophical logic, for example, deals with the nature of truth; philosophical ethics, with the nature of moral goodness, and philosophical economics with the nature of wealth, or economic well-being. Other branches

however, are relatively complex, inasmuch as they deal with selected phases of human life, *e.g.*, the philosophy of history, the philosophy of the State, the philosophy of religion, and the philosophy of knowledge. This last makes use of science and of certain elements of metaphysics, but in the main it is a criticism of the knowledge-value of human perception and thought.

Until recently what has been called the philosophy of religion has been mainly metaphysical. It has been *religion's philosophy*—the religious man's theory of reality. More recently the term has been used to denote a branch of philosophical criticism; it has been *philosophy about religion*.

Now all thinkers, whether believing or sceptical from the religious point of view, can agree on the possibility of the philosophy of religion as a branch of critical philosophy. Such a discipline would undertake to consider as critically as possible the question of the value of religion for life, including its value for knowledge. The question as to whether the philosophy of religion ought to include a metaphysical part, embodying religion's philosophy of reality, will be answered according to the outcome of that part of the critical philosophy of religion which deals with the value of religion for knowledge of reality. If the outcome is negative, unfavourable to the validity of "religious knowledge," the metaphysical part will be omitted (as in Höffding's *Philosophy of Religion*). But if the outcome of the philosophy of religious knowledge should turn out to be positively favourable to religion, upholding the view that, in religious experience and thought at their best there are both awareness of a divine Factor in reality and, as a consequence of this, essentially true judgments as to that Factor, then the philosophy of religion will naturally and very properly go on to develop and include a metaphysical part. In this case we would suggest the following division of the subject: I. The Critical Philosophy of Religion: (1) Introductory: The Empirical Basis; (2) The Philosophical Construction. II. The Metaphysical Philosophy of Religion: (1) Introductory: The Empirical Basis; (2) The Philosophical Construction.

This second alternative, favourable to the development of a metaphysical part, being the position to be defended here, we shall proceed forthwith to indicate in outline the content of

PART I. THE CRITICAL PHILOSOPHY OF RELIGION.

The empirical basis for the critical philosophy of religion is to be found mainly in the history, psychology, and sociology

of religion. Here the chief matter of concern is the essential nature of religion, with special consideration of the concept of progress in the development of religion.

The question of the essence of religion presupposes a definition of essence. The essence—strictly speaking, the *good* essence—of any historical or experiential *quantum* is that in the facts which it is essential to retain in order to realise some valid ideal—provided this selected element can retain its vitality when separated from all which it is essential, for the same purpose to exclude. Roughly speaking, it is the greatest common measure of the actual and the ideal. The *bad* essence of anything, on the other hand, is that which it is essential to exclude, if the ideal is to be realised. Whatever has a good essence is essentially good. Whatever has a bad essence is not necessarily essentially bad, but whatever has no good essence and has a bad essence is essentially bad.[1]

In dealing with the question of the essence of religion, it may be well to distinguish between what we may call the quintessence of religion (that in historical and experiential religion which it is *most essential* to retain), and that which, in addition to this, may be considered essential. It may be suggested that the quintessence of religion is the element of aspiration, or *devotion to a divine Ideal—i.e.*, to an ideal worthy of man's supreme devotion, worth living for, and, if need be, worth dying for. All but extreme pessimists will agree that this is a good essence. But the essence of religion also includes—whether it be considered a good or a bad essence—*dependence upon a divine Being—i.e.*, a being worthy of man's absolute dependence. Devotion to an ideal regarded as divine, we may call *fundamental religion*. Dependence upon a being regarded as divine, we may call *experimental religion*.[2]

The main problems of the philosophy of religion centre about experimental religion, since there is little room for question as to the value and validity of religion as devotion

[1] For a fuller discussion of the concept of essence, see my article in the *Harvard Theological Review* for January, 1914, entitled, "What is the Christian Religion?"

[2] The highest conceivable unity of fundamental and experimental religion would be that in which the divine Ideal was found in the divine Being. This would not necessarily mean that the ideal was realised in such a way that it could no longer be an ideal. The reality of the ideal might be the reality of a divine *Will*, having as its content the highest possible good, but the content of that Will might be not yet fully realised. Whether or not such a unification of fundamental and experimental religion is rationally possible, belongs to the metaphysical part of the philosophy of religion.

to the absolute Ideal. And so, before passing from this question of essence, let us consider what further, in addition to the essence *of* religion, may be regarded as essential *to* religion, especially to experimental religion. (The distinction is a valid one, as may be seen from the parallel instance of food, which, while not the essence of physical life, is essential to it.)

It may be said that it is essential to the continued existence of experimental religion, that there should be something in experience which can be taken as "revelation," *i.e.*, as giving evidence of the reality of the divine Being. An obvious form for this revelation to take would be the experience of deliverance from some supreme obstacle, or evil, through dependence upon the divine Being. This deliverance from evil through religious dependence, experimental religion itself has called "salvation".[1] If no such experience can be counted upon in response to any discoverable form of religious dependence, it does not seem possible that experimental religion should permanently survive.

But in addition to what is essential for the continued *being* of religion, we may ask, What further is essential to its *well-being?* Here several elements may be enumerated. First, social life in general, with its influence on the development of ideals and interests for the sake of which man is impelled to be experimentally religious. Again, and more particularly, there is the social life of the religious community, with its religious experience to be shared by the individual, and its religious history and traditions. Moreover, the well-being of religion undoubtedly calls for the expression of religious thought (in a creed),[2] of religious feeling (in a form of worship), and of the active impulses fostered by religion (in conduct which is felt to have the sanction of religion). And it would

[1] The Object of religious dependence does not normally remain to the religious subject a mere Means. There is a natural psychological transition from the successful use of an object as means to the gratified contemplation of it as end. The divine Being tends, as the consequence of man's successful religious dependence, to become an Object of contemplation, and so—as in worship, with its more or less mystical developments—an End.

[2] The function of the thought-element in religion has been interpreted by the rationalists as simply the anticipation, in terms of the imagination, of the main contents of a true philosophy; by the symbolists and subjectivists as simply the symbolic expression of religious feeling, and in current pragmatism as simply the functioning in a comprehensive way as instruments of adjustment to the situation with which the individual or the group is confronted. As a matter of fact religious ideas are related to cognition, feeling, and action, and discharge at once all three of the mentioned functions.

seem the part of wisdom for the religious individual, in freely choosing his creed, ritual, and rules of conduct, to consider seriously, in addition to his individual needs and experiences, the possible requirements or contributions of the social life in general and of the vitally religious community in particular.

Finally, it would seem essential for the most effective preservation and propagation of experimental religion, that there should be an institution, a social religious organisation, to devote itself particularly to these ends. The church is ostensibly such an institution, and the true—or truest—church is that one which most effectively preserves and propagates the best form of experimental religion. And that is the true form of church government which, in any given situation, is, religiously considered, the most efficient.[1]

But if we are to have an adequate empirical basis for estimating the value of religion, we must see it, not only in its general nature, but in the main lines of its development, and especially in such progress toward a definite goal as its historical and contemporary forms may manifest. The question of the genesis of experimental religion, or, in other words, of its differentiation from pre-religious or only quasi-religious life, has been much discussed; but with the definition of its essence here adopted, its origin as a life adjustment definitely different from other experimental relations will naturally be sought in some crisis, some situation in which other adjustments are felt to be inadequate or even futile, and which calls for some form of turning to and depending upon the Being or Power felt to be supreme and the ultimate court of appeal.

But not only has experimental religion come to be clearly differentiated from other phases of human life; within the developing life of religion itself, many differentiations have taken place. The primary or most general internal differentiation of religion has been into regional groups of somewhat similar religions. Asia has been the cradle of practically all the great historic religions, and what we have called the primary differentiation of religions is associated with three great divisions of Asia—the East (China and Japan), the South (India), and the West (Persia, Mesopotamia, Arabia, Syria, and Palestine).[2] The indigenous religions of the East

[1] Similarly, such questions as those of church union, and the conditions of church membership, should be considered from the point of view of the interest in religious efficiency. The *religious* efficiency of a church is to be sharply distinguished, of course, from its efficiency as a political or special-class instrument.

[2] The closely bordering countries of Egypt and Greece may be included in what we have called the Western region.

are, in the main, law-religions, practical, this-worldly, ethical. The religions of the South are redemption-religions, mystical, other-worldly, philosophical. The religions of the West have tended to combine both sets of qualities.

The secondary differentiation of religions is into various religions which, for the most part, bear different historic names. They are in the main either national religions or religions which have grown up around some personal "founder". In the latter case, the God-idea tends to reflect the personal characteristics of the founder.

The tertiary differentiation of religions is the subdivision into sects. The general distinction between a religion and a sect, historically speaking, is that religions differ as to the "revelation" they regard as authoritative, while sects differ simply in their interpretation of that revelation, although they differ (or have differed) sharply enough to have found it desirable to form different fellowships.

The differentiations of religion have been occasioned by more or less accidental circumstances, such as geographical location (with consequences for climate, occupation, etc.) and individual leadership. But in the development of religion there have been other factors at work which are more universal in human nature and which have been tending, especially in recent times, toward unification. Speaking broadly, these factors are the common needs and interests of developing humanity, experience and observation of the consequences of certain ways of acting, especially in experimental religion, and rational reflexion upon the facts of experience. These factors tend to refine and spiritualise religion. More particularly, they tend to make experimental religion more rational and more moral.[1] But besides these two criteria (development in rationality and development in morality), religious progress involves a third, *viz.*, conservation of vitality.

[1] Experimental religion has become consciously moral when it has learned to seek moral reinforcement through dependence upon the absolute Being (interpreted as moral) for the realisation of moral ends. This is a content to which there can be no valid rational objection, and so, as development in rationality and scientific outlook discredits superstitions, beliefs, and practices, experimental religion must develop in morality, or die. Among critical thinkers experimental religion is ultimately either rationalised out of existence, or else it tends to be rationalised into its final and universally acceptable form—which form must be moral. It should not be overlooked, however, that many times the religious relationship has been entered into for other than consciously moral ends, and that even here the result tends to be to promote moral values, rather than the other-than-moral ends directly. This fact tends, especially among the thoughtful, to make experimental religion *primarily* moral in its ends and aims.

Religion at its best, then, whatever else it may be, must be religion in its most vital, moral, and rational form.

Having arrived at these conceptions of (1) the essence of religion, and (2) religious progress and religion at its best, we may now turn to the critical philosophy of religion proper. What is the *value* of religion?

There is not much dispute as to the value of fundamental religion—devotion to the absolute Ideal. Its value for life is obvious. So ought to be its value for knowledge—at least for knowledge *of values*.

There is more difference of opinion, and hence more call for philosophical criticism, with reference to the value of experimental religion. A critical philosophy of religion must examine the value of experimental religion (1) as an end, and (2) as a means (*a*) to life, and (*b*) to knowledge *of reality*.

The primary and only adequate basis for the appreciation of the value of experimental religion *as an end* is the religious experience in its immediacy.

The discussion of the value of experimental religion *as a means* toward other ends in life will include a consideration of its effectiveness for promoting, directly or indirectly, the moral, social, æsthetic, hygienic, economic, and political well-being of humanity. Here the basis for judgment must be empirical information—historical, psychological, and sociological.[1]

In all of these estimates of value, exaggeration must be guarded against. Sceptical prejudice tends to deny to experimental religion any positive value, while mystical religion tends so to absolutise the value of religion as to deny ultimate value to anything else. A more critical view will recognise that in historic religion, or intimately associated with it, there has been, on the one hand, much that has been unfavourable to the moral, social, æsthetic, hygienic, economic, and political well-being of mankind, and, on the other hand, much that has tended to promote these human values. In general, it may be said, the way in which experimental religion promotes the other fundamental human interests is not so much directly as by strengthening and developing the moral will of the individual, who then seeks more diligently and effectively to promote some of these other human values.[2]

But the crucial question is not so much the practical

[1] The intellectual value of religion might have been included under "values for life," but the relative importance (*for philosophy*) of the question of religious knowledge suggests the division we have adopted.

[2] Here, again, intellectual or knowledge-value might have been included.

value of this or that more or less imperfectly developed historic religion, but the question of the value of experimental religion at its best. Here the question may be raised as to whether in its most vital and spiritual (*i.e.*, moral and rational) form, it is not so valuable as to be indispensable to the highest possible well-being of the individual and of the race. In the light of available information we would express the judgment that, other things being equal, a higher degree of individual and social morality can be realised with the aid of experimental religion at its best than without it; and if this is so, such religion, if it can be shown to be intellectually tenable, must be regarded as indispensable, not only to the highest moral well-being of humanity, but also (in view of the fundamental relation of morality to other spiritual and even material values) to the highest general well-being of humanity.

The final test of the value of religion is the critical examination of the knowledge-value of its essential experiences and ideas, or, in other words, the intellectual value of religion at its best. Here we enter the field of the philosophy of religious knowledge, or religious epistemology. Now the situation with reference to the problem of religious knowledge is closely parallel to that which confronts the student of the problem of knowledge in general. We shall first of all, therefore, survey the more general field.

In general epistemology, it is found, almost all theories readily fall into one or other of three main classes, *viz.*, a dualistic doctrine and the two corresponding one-sided monisms. Thus with reference to the problem of direct, immediate, or presentative knowledge of physical objects, there are the three groups of views. Idealistic monism claims that physical objects are directly presented in perception, inasmuch as physical objects are nothing but ideas, using the term "idea" either in the psychological sense of the word (in subjective idealism) or in the logical sense (in objective idealism). Realistic monism in its extreme form claims that physical and other objects are directly presented in sense-experience, and retain all their qualities of colour, sound, and the rest, even when they are not presented to anyone. Epistemological dualism maintains that what is presented in sense-experience is a representation of the independently real object, and not the object itself.

This dualistic position is incurably agnostic. There is always room for doubt as to whether the independent object, if it exists at all, is really knowable through the appearance which is supposed to represent it.

The strength of epistemological dualism is in its hard-headed, critical common-sense, but it is weak in philosophical construction, and it leaves its task unfinished. The two one-sided monisms, on the other hand, are strong in imaginative construction, but weak in critical common-sense. They give point to the remark of William James, that this unifying or monistic tendency, with its enthusiasm for construction, "may need to be snubbed" occasionally. It tends to be unfair to facts and to well-established distinctions of ordinary human knowledge. It may be a mark of ingenuity, but it is no mark of critical common-sense, to suggest that material things are ideas, either in the sense of mere dependent contents of states of consciousness, or in the sense of general meanings or definitions. Nor is it in accord with the common-sense scientific principle called "the law of parsimony" to suppose that all the actual and possible variations of quality in sense-presentations are real independently of their relation to the perceiving subject.

Instead of any of these three sorts of theory of direct knowledge, we would suggest a view which may be called that of *critical monism*. It stands for the attempt to combine with the critical common-sense of the dualists a little more of the constructive enthusiasm of the monists. In other words, critical monism may be described in preliminary fashion—it is not a definition—as a philosophy which consciously seeks to be as monistic as it can be, while remaining as critical and as loyal to experienced fact as it ought to be. It would find the solution of the problem of immediate knowledge in the view that the physical object is a certain quantum of energy existing in certain relations independently of the perceiving subject, and that on occasion of certain subjectively produced sense-qualities and apperceptive elements, it is presented directly to the perceiving subject *in* the complex of these qualities and elements. Thus without departing from the point of view of critical common-sense or violating the conservative, scientific "principle of parsimony," agnosticism would be avoided and the problem of acquaintance, or immediate knowledge, solved.[1]

But in addition to the problem of acquaintance, or direct awareness, general epistemology must face the problem of indirect knowledge, or how to arrive at valid certainty of the truth of judgments. This involves two problems, the problem of truth and the problem of valid certainty, or proof.

[1] For a more detailed discussion of the problem of immediate knowledge and exposition of "critical monism" as its solution, see the writer's recent book, *The Problem of Knowledge* (Macmillan Company, New York, 1915, and Geo. Allen & Unwin, London, 1916), chaps. ii. to xvi.

On the problem of truth we find, as in the case of the problem of acquaintance, two extreme and one-sided monisms (in this case intellectualism and anti-intellectualism, of which latter the chief form is current pragmatism), and a corresponding extreme dualism. According to extreme intellectualism truth is the identity of predicate with subject, of the idea with the thing. But here the criticism is obvious that on this definition there can be no true judgment that means anything, for in any significant judgment there must be a distinction between the subject and the predicate. And indeed the consistent intellectualist admits that he cannot see how any human "truth" can be really true.

According to extreme pragmatism, truth is the practical value of the idea in dealing with the thing. Here, as distinguished from intellectualism, which makes truth inaccessible, truth is made too accessible. Whatever judgment served the purpose good or bad, with which it was made, would be, for him who made it and for the time being, true.

According to extreme dualism, truth is in some cases the one thing and in other cases the other, intellectualism being valid in the realm of pure reason and pragmatism in the realm of the practical reason. This simply adds to the difficulties of the one view the difficulties of the other.

Critical monism, however, in distinction from the two one-sided monisms and the dualism, would maintain that truth, or trueness, is a quality which may be predicated of judgments in which the predicate, or idea, is practically identical with the subject-matter which it represents. In other words, and more strictly, in making a judgment one is justified in regarding it as true if its predicate represents the reality judged about, sufficiently for all the purposes which ought to be considered in making the judgment; and the contradictory judgment one would be justified in regarding as untrue.

With reference to the problem of proof it may be sufficient to say that the true method is that union of rational with empirical procedure which we find in empirical science.[1]

But in the philosophy of religion our concern is not so much with the problem of knowledge in general as with the more particular problem of religious knowledge. Here we have, as in the other case, the problem of direct, immediate knowledge, or acquaintance, and the problem of indirect, mediate knowledge, or proof of the truth of judgments.

The fundamental problem of religious epistemology, the problem of religious acquaintance, is the problem as to

[1] For a more detailed discussion of both the problem of truth and the problem of proof, see the writer's *Problem of Knowledge*, chaps. xvii. to xx.

whether there ever is, in religious experience, direct awareness, or what is ordinarily called perception of the religious Object, the divine Reality ; or, in other words, whether the Divine is ever recognisably revealed within the field of human religious experience. Here again, as in general epistemology, most theories fall into one or another of three classes, two one-sided monisms and a corresponding extreme dualism.

On the one hand there is an idealistic monism with reference to the religious Object. Of this there are again as in general epistemology, two forms, subjective idealism and objective idealism. As subjective idealism in general philosophy is the result of a fallacious snap-judgment to the effect that psychology shows physical objects to be mere complexes of "ideas," in the sense of psychical contents, so subjective idealism in the philosophy of religion is the result of a fallacious snap-judgment to the effect that the psychology of religion shows the religious Object to be nothing but an idea, or complex of ideas, in the human mind ; in other words, that so far as religious experience when scientifically examined, can say, there is no God but the God-idea (*cf.* Fenerbach, and more recently, Leuba and many others). This would be a positive solution of the problem of religious knowledge, it is true ; but it would be at the cost of atheism. It would affirm the possibility of immediate knowledge of the religious object, since what it means by the religious object is a product and mere dependent content of human consciousness. But the psychology of religion no more proves the truth of subjective idealism with reference to the religious Object than psychology in general proves the truth of subjective idealism with reference to the physical object.

Objective idealism regards the object of religious experience as it does all other objects of experience, *viz.*, as a logical idea, or a complex of logical ideas, or it may be, as a complex of logical ideas with an immediate content of consciousness. Moreover, it would substitute for the God of practical, historical religious experience, the complex unity of all logical ideas, whether with or without all immediate feeling in the Absolute Idea. But this is open to two main criticisms. On the one hand, as an argument it is fallacious; it involves a snap-judgment to the effect that there is an existential identity between the object defined and its complex definition—or at most, its complete definition in combination with certain subjective impressions. On the other hand, from the point of view of practical religion, objective idealism is simply a refined, intellectual species of idolatry. It substitutes a false god, the artifact of thought, for the true God which positive experience claims to discover as an independent Reality.

At the opposite extreme from these one-sided idealistic monisms in the philosophy of religion, which involve as we have seen, either atheism or a species of idolatry, there is a one-sided realism with reference to the religious Object. Of this the best examples are to be found among the more extreme mystics. Their tendency is to ignore the large element of pure subjectivity in mystical experiences, and to affirm as objectivity valid practically all that is suggested in the mystical state. Inasmuch as the characteristically mystical experience involves a highly concentrated contemplation of the religious Object, thought of as perfectly good, there is a tendency for the consciousness of the self and of finite individuals and the physical world to disappear, for the time being; and the same thing is true of the consciousness of all sorts of evil, and of consciousness of the lapse of time. Then, under the influence of the suggestion that the mystical state is superior, from the point of view of knowledge as well as from the point of view of life, to all non-mystical states, the extreme mystic makes bold to affirm that there is but one Reality, *viz.*, God, and that physical things, finite selves, time and evil are all unreal —mere deceptive appearances in "mortal mind". Thus extreme mysticism is, in the philosophy of religion, what the more extreme forms of "the new realism" are in general philosophy, and the criticisms to be made in the two cases are much the same. In both there is dogmatism and a fantastical departure from critical common-sense. In violation of the principle of parsimony, qualities are affirmed to be independently real which there is no scientific reason to regard as more than the subjective products of subjective activity. There is no practical test which shows it to be necessary to assume their independent reality.

Distinguishing itself from both the idealistic and the realistic form of extreme monism with reference to the religious Object, there is the very common religious position of extreme dualism, according to which there is a real religious Object, or God, distinct from all ideas of God, but which never comes within the field of human experience, or direct awareness. Here again, then, naturally the tendency is to extreme agnosticism. If God is never, strictly speaking, revealed within the field of human experience, never the direct object of human awareness, how can we know what He is, or even that He is? What basis is there for the verification of our theological theories? Some dualistic philosophers of religion are frankly agnostic; but others try in one way or another to escape the logical consequences of their theory. One favourite method is to point out that even if we are shut up

to a subjective world, so far as direct experience is concerned, we can do two things with these subjective contents: we can describe them, in which case we get the sciences, or we can evaluate them, and our judgments as to religious value can be so manipulated as to give us an ostensibly objective theology. Or, according to a rather cheap and easy pragmatism, while we cannot know anything about God on a purely theoretical basis, we are justified in believing in a God of a certain sort, in view of the valuable practical results following from such a belief. Now whatever may deserve to be said concerning the merits of such a position from a practical point of view, provided it is psychologically possible, it remains clear that what it offers is not religious *knowledge*. Theoretically, it remains on the ground of agnosticism.

In distinction from all these positions in religious epistemology—from idealistic monism, the subjective variety with its atheism, and the objective variety with its species of idolatry; from the extreme realistic monism ef mysticism with its extravagant dogmatism, and from extreme dualism with its consequent agnosticism—we would advocate again what may be called a critical monism. As it is maintained, and with ample justification, in judgments of common-sense and science, that independently real physical objects are presented, revealed to, and experienced, perceived, intuited by the conscious subject in the complex of sense-qualities for which the sense-process is responsible; and as one's own self is intuited, immediately known to be present, in the complex of psychical activities (perceiving, remembering, thinking, willing, and the rest), and as these activities in turn are experienced, intuited, perceived in their characteristic complexes of psychical products (perceptual elements, memory images, thoughts, volitions), and, once again, as we become in a direct experiential and intuitive way, and not first through explicit inference, aware of life in ourselves and in other bodies, and of other consciousness or minds than our own, each in its own characteristic complex of sense-elements, so it is in the present instance. It may be maintained by the person of adequate religious experience, that the religious Object is revealed within the complex of that experience. God, defined as a dependable Power, which makes for righteousness in and through the human will in response to a certain discoverable religious attitude [1] (of concentrated attention, steady

[1] Other definitions of God may be given, such as the satisfactory Object of religious dependence, the Source of religious deliverance from evil, or a Power in the world great enough and good enough to enable the man who rightly relates himself thereto to be inwardly or spiritually prepared for whatever he may have to face, whether it be difficult duty, suffering, temptation, death, or whatever there may be after death.

dependence, ethical self-surrender, and responsiveness) is an Object of empirical intuition,[1] *i.e.*, of direct acquaintance to the man of adequate experimental religion. Not all fugitive suggestions of special developments of the religious consciousness are to be taken as valid; but, on the other hand, the God of which one has experience can no more be identified with the mere idea of God, from the point of view of practical religion, than the idea of food can be taken as food with satisfaction to the physical life.

With reference to the problem of truth in religion, the situation is quite similar to that which obtains in the more general field of knowledge. Extreme intellectualism, extreme pragmatism, extreme dualism—all of these have their representatives, and are open in the religious field to the same criticisms as apply in the more general sphere. Only, it is to be noted, the danger of making a careless and extravagant use of pragmatism is probably greater in religious apologetics than in most other fields of thought. What we would advocate, indistinction from intellectualism, current pragmatism, and dualism, is that synthesis of the partial truths of intellectualism and pragmatism which we defined, under the term "Critical Monism," in connexion with the general problem of the nature of truth.

There remains, however, as a part of the problem of religious epistemology, the problem of religious proof, or, in other words, the problem of the scientific verification of religious judgments. This leads us into the whole question of theological method. Here, as in the other fields of our investigation, prevailing points of view are classifiable into two opposite and one-sided monisms and a corresponding dualism.

On the one hand there is the point of view of extreme rationalism, seen in the so-called "speculative theology," undertaking to derive by deduction from a few universally self-evident truths, or by a dialectical process from the categories inherent in "pure reason," the main contents of a theological system, and to furnish for it at the same time an absolute proof. The constructive enthusiasm of the rationalistic theologian awakens interest and expectation at first, but in the light of criticism speculative theology proves unsatis-

[1] In advocating an empirical intuitionism in religious epistemology we do not for a moment intend to suggest an uncritical attitude toward religious intuition. On the contrary, our *critical* monism would hold that intuition, in religion as in the realm of sense, while a source of possible knowledge is not infallible. It must be taken critically. And the approved instrument for this criticism is scientific method.

factory in its religious content and far from convincing in its "proof".

On the other hand, we find a variety of theological methods, all rejecting the rationalistic procedure and exemplifying a one-sided empiricism. First, there is *mystical* theology, appealing rather uncritically to the suggestions of the mystical experience, and taking them at their face-value as legitimate elements of religious belief. Then there are a number of one-sided empirical methods which we may class together as more or less *eclectic*. Some religious thinkers simply choose such doctrines as they "like to believe," ideas that "appeal" to them, and are not concerned to apply any further test of truth. Others (*e.g.*, Schleiermacher) would correct such undue individualism by appealing to the religious feeling which is shared by a religious fellowship, making theology a systematic intellectual expression of this feeling. Others again (*e.g.*, Ritschl) would correct the undue subjectivity of such a procedure by stipulating that the shared feeling of religious value must be that which is controlled by some further objective norm. This norm, according to Ritschl, is to be found, not in metaphysics but in history. In particular, it is to be found by taking the historic figure of Jesus essentially as it was taken by the primitive church, *viz.*, as embodying the values that are to be regarded as divine. From the point of view of scientific method, all of these procedures are to be criticised as still unduly subjective and arbitrary, and thus as merely eclectic. A contemporary theologian (Troeltsch) recognises the necessity of uniting rational with empirical criteria in theology, but in his actual procedure he falls short of attaining to any real synthesis of the rational and the empirical, such as is to be found in the empirical sciences. On the basis of a philosophy of the history of religion he concludes that Christianity is the best religion, at least for our time and for the Western world, and so he undertakes to construct a system of theology which will express the Christian religious feeling, and at the same time be unobjectionable on grounds of reason. In spite of much that might be said in its favour, it is obvious that such a system remains essentially eclectic. It has not the kind of rationality that amounts to verification. Another theological procedure suggested recently (by Wobbermin) is even more conspicuously eclectic. Starting with a psychological examination of "the varieties of religious experience," he finds that religion is always interested in the question of the truth of its ideas concerning the transcendent Being which is the Object of its dependence. Hence, he claims, the theologian

who would serve religion must choose from among the various religions that one whose experiences he can share, and whose ideas consequently he can believe to be true, even prior to all practical and metaphysical arguments. So he makes his theology, like that of Schleiermacher, essentially the expression of the religious consciousness of a community.

One more one-sidedly empirical theological method must be mentioned, *viz.*, the *pragmatic*. This method has been used often enough in a very slipshod manner; but at its best its principle may be stated as follows: That theology is to be regarded as true which is practically necessary to sustain the experimental religion which is practically necessary to sustain the highest possible degree of that sort of morality which is necessary for the highest degree of human well-being. Now a carefully critical pragmatic procedure may perhaps be the best of all methods for theology, short of a truly scientific method; but it must be clear that the above principle would be very difficult to apply, and in any case it would remain essentially eclectic and lacking verification in the scientific sense of the word.

In addition to the one-sided rationalism and the different types of one-sided empiricism in theological method to which we have referred, we must notice the extreme dualism which was characteristic of the method of the older theology. Part of its content (theism, and especially the "ontological proof") it professed to derive in rationalistic fashion, by deductive argument, and the remainder ("revealed theology")—although at second-hand—from religious experience ("inspiration" and "revelation"). The logical deficiences of the older rationalistic, demonstrative theism have often enough been pointed out, and need not now be dwelt upon. On the other hand it may be remarked that when the traditionalistic theologian claimed to make theology a science, what he meant was simply a self-consistent system of doctrines, derived by scientific methods of interpretation from his more or less arbitrarily chosen authority. Of scientific method in the proper sense of the term, all traditionalistic systems of theology have been entirely innocent.

In opposition to both extreme monisms in theological method (the rationalistic and the empirical) and to the extreme dualism, what we may call again "critical monism" would undertake no mere choice between, or mere juxtaposition of, the rational and the empirical procedures, but their synthesis in a truly scientific method, *i.e.*, a method related to the discoveries of religious experience as the recognised physical and other objective sciences are related to the dis-

coveries of sense-experience. The content of such a theology would fall under four main heads, *viz.*, presuppositions, empirical data, empirical laws, and theological theory.[1] Moreover, its feasibility would vindicate the favourable verdict passed upon the value of religion at its best.

II. The Metaphysical Philosophy of Religion.

We are now ready to turn to the second division of our outline of the philosophy of religion, *viz.*, the metaphysical. Here the main content of the special "empirical basis" for the philosophical construction would be found in the scientific empirical theology to which we have referred at the close of Part I. of our discussion. We shall therefore pass immediately to the metaphysical construction proper..

William James has described metaphysics as an extraordinarily obstinate attempt to think clearly and consistently. This will serve as a definition, if we add that its subject-matter is the nature of reality in its more general aspects and as a whole.

The history of metaphysics is not very reassuring as to its future possibilities. While science has made fairly steady progress, metaphysics might almost be said to have been wandering about in a circle, like a traveller lost in a fog or in a wood. This may be because, like theology, metaphysics has been without an adequate method.

The most important types of metaphysical method before the world to-day are three. First, there is the rationalistic or speculative method, aiming to demonstrate by a deductive or a dialectical process, and with almost no reference to the facts of experience, the ultimate nature of reality in general and as a whole. However satisfactory this method may seem to be at first, a critical examination of its many and strangely differing resultant systems goes to show that it has been a failure both as to doctrinal content and as to the certainty of its "proof".[2]

A second method is that of synthesising the more general conclusions of the recognised empirical sciences, theology being, of course, excluded. This leads to results which, in so far as they are positive rather than negative, are fairly satisfactory with reference to certainty. But in doctrinal content

[1] For a detailed working-out of this projected *novum organum theologicum* the writer must refer to a work which he hopes will be published in the not very distant future under the title, *Theology as an Empirical Science.*

[2] This is put dogmatically here, because of limitations of space and time; but a partial justification of the statement may be found, I think, here and there throughout chaps. v. to ix. of *The Problem of Knowledge.*

the result is unsatisfactory, because so incomplete. Certain metaphysical questions, of the greatest practical as well as theoretical interest, it must either ignore and leave unanswered or answer with a dogmatic negative to some of the highest human hopes and aspirations.

A third metaphysical method seeks to remedy this deficiency by effecting a combination of the established results of the recognised sciences with the metaphysical doctrines which are felt to be necessarily bound up with our consciousness of values. For example, the doctrine of human free agency seems bound up with our consciousness of moral values, and the doctrine of the existence and religious sufficiency of God seems bound up with our consciousness of religious values. Now this method, if applied with duly critical care, may lead to very satisfactory results, especially with reference to doctrinal content. But with reference to certainty it will always leave something still to be desired, because of the failure of a part of its content to arrive at a completely scientific form. It remains in the end a synthesis of scientific information with a set of *postulates*.

As distinguished from the first method, which is defective in both content and certainty, as also from the second method, which is defective in content, and from the third, which is defective in certainty, we would suggest a fourth method as the true metaphysical method, and one which will ultimately prove satisfactory, we would hope, both as to content and as to certainty. This is the method of synthesising the results of the empirical sciences, theology as an empirical science being included. (In framing the synthesising theories, it may be remarked, there will probably always be ample scope for the exercise of *wisdom*, as well as opportunity for the use of *information*.)

Having thus indicated a point of view with reference to both theological and metaphysical method, we are in a position to discuss a little further, before turning to particular metaphysical problems, the mutual relations of metaphysics and theology. We shall refer on the one hand to the reaction against theology in metaphysics and to the reaction against metaphysics in theology, and on the other hand to the function of theology in metaphysics and to the function of metaphysics in theology.

Metaphysics has shown a tendency to react against theology and to include it as a foreign and vitiating element. This has been true of the main streams of philosophy from the beginning of the modern period. This reaction against theology has been intended to safeguard the true metaphysical content

and its adequate certainty. And it must be acknowledged that as against so unscientific a type of theology as that of scholasticism, whether Catholic or Protestant, the movement was largely justified. But if the reaction is against all theology, the result can only be, as it has already proved to lead to results which cannot fully satisfy the normal human consciousness. There will be deficiencies of content first of all, but also, since verification in religious experience is ruled out, deficiencies of certainty as well. However, if it is because theology has been unscientific that it has been excluded from metaphysics, perhaps when the ideal of theology as an empirical science has been realised, it will no longer seem necessary to the metaphysician to exclude the contributions of such a theology from his synthesis.

But the repugnance between metaphysics and theology has often been mutual. Theology has shown from time to time a tendency to react against metaphysics. This has been especially conspicuous in the Ritschlian movement. For the sake of conserving both the distinctly religious content of theology and its distinctly religious certainty, it has been maintained that metaphysics should be excluded from theology altogether. And no doubt there has been a large measure of justification for theology's reaction against the prevalent types of metaphysics, with their deficiencies either as to content or as to certainty or as to both. But if all metaphysics is to be excluded from theology, if the religious thinker is not to be permitted to submit the religious content and certainty of his theology to the final test involved in seeing whether or not his doctrines are compatible with the well-established results of science in other departments of investigation, doubt is sure to be suggested as to whether indeed his theology would stand such a test. Thus the so-much prized religious certainty of theology will be imperilled, and as a consequence its religious content also.[1] If, however, metaphysics should eventually come to be, as we have suggested, a synthesis of empirical sciences, theology being included, there will no longer exist any reason, of course, for the exclusion of such metaphysics from theology.

Thinking, then, of theology as an empirical science, and of metaphysics as a synthesis of the sciences, theology being included, the mutual functional relations of the two can be readily defined. Theological theory, resting upon empirical theological laws, will furnish material for metaphysical

[1] Further details on the topic of this paragraph may be found in the writer's dissertation, entitled, *The Reaction against Metaphysics in Theology*, printed (not published) in 1911.

hypotheses, as do scientific theories in general. The elements of scientific theological theory will be tested as to their compatibility with other empirically grounded elements of metaphysics, and will thus be in a position to make their due contribution to the content of metaphysics. But metaphysics will gain thereby in certainty as well, since the theological elements will come with the backing of verification in religious experience. On the other hand, theology in its turn will gain in certainty as a result of having its religiously supported theories finally confirmed by their proved compatibility with the established results of the other sciences. And not in certainty alone, but in content also, theology may expect to be enriched through its contact with metaphysics, since in this way all the more general results of the sciences will be placed at its disposal. Thus it would appear that while theology and metaphysics are bound to be mutually incompatible so long as their respective methods remain defective, when theology shall have become an empirical science, and metaphysics a wise synthesis of the well-established theories of all the empirical sciences, the two will be seen to fit into each other's needs in such a way as to be not only mutually compatible, but practically indispensable the one to the other.

We are now in a position to turn our attention to particular metaphysical problems, and in doing so we shall deal simply with those questions concerning the nature of reality which are of special interest from the point of view of the philosophy of religion. These are the problems of matter and mind (including that of body and mind), of law and freedom, of evolution and creation, of mechanism and purpose, of nature and the supernatural, of the one and the many, and of good and evil.

We shall first take up the question of the quality of being, or the problem of matter and mind. With reference to this problem almost all metaphysical theories fall into one or another of three groups, an extreme materialism, an extreme immaterialism, and an extreme dualism.

Materialistic monism is the doctrine that in its true or ultimate nature all reality is material. Sometimes what is called mind or consciousness is explained by the materialist as simply an extraordinarily fine and mobile material substance; sometimes definitely as a secretion of the brain. Sometimes again it has been declared to be simply a mode of motion of elements in the brain, or a certain form of behaviour of the nervous system. In some instances consciousness or mind has been identified with the content of that cross-

section of the physical—or, as some would say, "neutral"—realm to which the nervous system responds, either taken by itself, or together with that responsive action. Or again, in more general terms, consciousness has been said to be a mere external relation between different parts of the material world. Or the whole realm of the psychical has simply been identified with the unreal. A veiled form of materialism exists under the form of "energism," according to which matter is ultimately reducible to (physical) energy, of which the mental is also simply a variant form. The energistic account of matter may very well be true, strongly supported, as it is, by scientific investigation. But, like all forms of materialism, it is much more satisfactory in its account of matter than in its account of mind. It makes the mistake of regarding the material part of experienced reality as a fair and adequate sample of reality as a whole.

Opposed to materialism is another form of one-sided monism, *viz.*, immaterialism. This exists in several forms, *viz.*, spiritualism, idealism, and panpsychism. According to spiritualism there is but one sort of substance, *viz.*, spirit, or mind. Material objects are all explained as being either made up of embryonic spirit, or, as is more usual, as dependent appearances or ideas in a mind or minds. According to metaphysical idealism all realities, material and spiritual, are to be regarded ultimately as nothing but ideas or systems of thought. According to panpsychism some realities are made up of thought-content, and all others are made up of feeling-content, or some other sort of "mind-stuff". Now, as the antithesis of materialism, immaterialism is much more satisfactory, at least in some of its forms, in its account of the mental than in its account of matter. Under the influence of a more or less explicit desire to conserve the "spiritual" values of human life, it has tried to maintain that mental or spiritual reality is a fair sample of reality as a whole.

Both materialism and immaterialism excel in constructive enthusiasm, but they are both weak in critical common sense. Quite the opposite is true of extreme dualism. It holds that there are two absolutely different sorts of substance and two only, *viz.*, matter and mind. Except that they are both substances, existing some would admit, in time, they are regarded as having no common nature.

Now dualism is a more conservative philosophical position than the fantastical constructions of extreme monism, but it gives the impression of having failed to solve its problem. As an alternative we would suggest a more monistic view, and yet one which seems to be equally tenable, at least, from

the point of view of critical common-sense, so that it may be brought under the general caption of "critical monism". In the first place, from this point of view the sharpness of the opposition between mind and matter may be relieved somewhat by raising the question whether there may not be a third sort of reality, exhibiting characteristics which are not inherent in matter, but not possessing some of the essential characteristics of mind, *viz.*, a vital factor, or force, such as is posited and defended rather plausibly by some recent writers. But whether we adopt this vitalistic theory or not, it would seem possible to reduce the material, or physical, the spiritual, or mental, and the vital, if there be any such thing, to a common denominator. Matter, it may be maintained, is ultimately a form of energy, and when this rather obscure concept of energy is analysed, it seems possible to interpret it as the activity of some reality, with the modifications (of quality and relation) which it produces. Much the same thing may be said of the whole range of the mental, or psychical, although there must be no thought of reducing the psychical to anything physical, even to physical energy. The psychical seems to include the following factors, or elements: a subject of psychical activities; a number of sorts of creative activities, *viz.*, sensing, perceiving, remembering, imagining, conceiving, judging, reasoning, feeling, desiring, willing; the products of these activities, *viz.*, sense-elements (colours, sounds, etc.), perceptions, memory and other images, concepts, judgments, arguments, feelings of pleasure and displeasure, ideals, volitions; also, among the products of psychical activities, one which is present in all the higher manifestations of the psychical, *viz.*, that unique relation of togetherness between subject and object which, when regarded from the point of view of the subject, may be called awareness, and when regarded from the standpoint of the object, givenness; and finally, in this list of products, through the co-operation of certain co-ordinated physical activities in the body, conscious behaviour. Here again, then, in the psychical, we have, as in the physical, the activity of some reality, with the modifications (of quality and relation) which it produces. And the intermediate vital factor, if such there be, is also readily interpreted in similar activistic terms. Thus we have carried the unifying process beyond the point reached by dualism, and yet we have remained upon essentially the same common-sense basis.

There is a subordinate aspect of the problem of matter and mind, which is of very great practical as well as metaphysical interest, *viz.*, the problem of body and mind. It is not how-

ever, like the more general problem, a question of quality, but one of relation. More particularly, it is the question of the relation of the brain (most particularly, the "gray matter") to mind, or consciousness. To this question the more materialistic answer is epiphenomenalism, according to which the brain produces the "mental" phenomena as mere by-products, which have no power to act upon the brain, or even upon each other. The answer of immaterialism, is either spiritualism, idealism, or panpsychism, according to any of which the brain and brain-events, like all things physical, are mere inert and dependent products of the all-producing immaterial entity or entities. In opposition to both of these one-sided monisms, dualism in this connexion offers as its doctrine parallelism, according to which neither brain nor mind acts upon the other, but each acts within its own series only, the relation between the two sets of events being nevertheless, however mysteriously, *as if* there were interaction between them. In distinction from all of these rather fantastic constructions, our critical monism would give its adherence to the common-sense doctrine of interactionism, according to which there is real causal activity in both directions. This view, moreover, is compatible with the fundamentals of a moral and religious outlook, since it at least leaves room for such ideas as freedom, God and immortality.

We may now turn to the problem of law and freedom, or, as some would phrase it, law and chance, or differently still, determinism and indeterminism. On the one hand extreme monism, or determinism, maintains that the reign of law is absolute, that the total predetermination of events is universal, admitting of not a single exception. This would render the human consciousness of freedom and moral obligation illusory, which illusory consciousness, as well as all acts which we call morally evil, with their undesirable consequences, would of course have to be regarded as absolutely predetermined. This course of thought, besides being open to criticism on theoretical grounds,[1] would run counter to all practical experimental religion, as well as to any serious morality.

At the opposite extreme from this one-sided monism or determinism, there might stand—although it has had few serious defenders—an extreme tychism, or indeterminism, according to which every event would have to be regarded as a matter of chance. Not only would the so-called "laws of nature," themselves be regarded as mere approximations to

[1] See E. Boutroux: *Natural Law in Science and Philosophy.*

an absolute regularity—which many of them may be—but even such orderliness as undoubtedly exists would be held to have come about as a set of habits of the universe formed by pure chance, without any predetermination whatsoever. Human conduct would, of course, be regarded as having no more than an accidental relation to either previous or subsequent character. The moral and religious implications of such a view would naturally be only negative.

A view more widely entertained than this last is the extreme dualism which would hold that while some events are absolutely law-abiding and predetermined, there are others which are wholly void of predetermining factors, matters of the purest chance. One form of this dualism is found in fatalism, which regards the end as absolutely fixed, but holds that there are humanly free acts and chance events in the intermediate stages. Another form of the doctrine affirms complete determinism everywhere save in human choices, which are regarded as absolutely free and undetermined by any previous events or conditions.

Over against these views may be set a critical monism, according to which one may maintain that some measure of freedom and some measure of predetermination may be thought of as attaching to all events that come within the range of human observation, although the degrees of predeterminedness and freeness in different events may be widely different. Even the free decisions of the human will are not to be regarded as matters of chance, but as being very largely determined by character and circumstances. Moreover, even in so far as they are free and not predetermined, they are not to be regarded as causeless, but as being determined *at the time* in and by the essentially creative voluntary attention of the subject to certain considerations which constitute the motive of the action. On the other hand even the law-abiding events of nature may be regarded as happening in accordance with certain regular or, as it were, habitual processes, such as gravitation and other forms of attraction and repulsion, which general processes or tendencies may not have been *eternally* predetermined by either blind or conscious force, but *creatively* determined, perhaps, in the distant past, whether at once or through a long process of evolution. Moreover, if vitalism should finally claim our assent, it might be maintained that the life-processes, while very largely predetermined, are to some extent determined only at the time of their occurrence. Such a view as we have outlined would leave room for the validity of both morality and religion.

We shall now turn to the question of origins, or the prob-

lem of evolution and creation. At one extreme we find a one-sided evolutionism, according to which all things have come into overt being through an unfolding or evolution of what was virtually in the pre-existing conditions, without any creative act or factor whatsoever. At the other extreme one sometimes finds upholders of a one-sided creationism, according to which God first produces individual souls by special creative fiat, and then proceeds to create, in cinematographic fashion, all the contents of their consciousness —save such, perhaps, as they themselves create, as in volition. Opposed to both of these one-sided monisms, dualism would hold that some events are special acts of creation and not at all evolutionary, while others are evolutionary, without any creative element whatever. There are different varieties of this dualism, some for instance making the origin of species creative and the origin of varieties within the species evolutionary, while others would make the origin of species evolutionary, reserving explanation by the theory of creation for such events as the first appearance of life and sentience and rational consciousness.

But over against all these views we would set, as a critical monism, a doctrine of creative evolution, according to which evolution is creative, and all creation evolutionary. Outside of the organic realm the case for present creativeness is rather problematical, but the notion seems not inconceivable. In any case, while adhering closely to science and common sense, the view is one which seems eminently favourable to the validity of the moral consciousness, and to a vitally religious interpretation of the universe.

We now come to the question of end, purpose, teleology—the problem of mechanism, or finalism. Extreme mechanism maintains that all events which take place in the physical world, including not only all vital processes but all human behaviour, are purely and without remainder mechanical movements; no purpose has any dynamic potency; there is no force, ultimately, but mechanical and (the essentially similar) chemical force—*vis a tergo:* the whole universe is a gigantic machine, and every organism neither more nor less than a machine within a machine. To begin with, this is not science, but pure dogmatism in the realm of metaphysics. It never has been, and one cannot imagine how it ever could be, scientifically verified. And, needless to show at length, it would take all validity out of morality and experimental religion, and indeed all meaning out of the whole life of the human spirit.

On the other hand, extreme finalism, in its classical form,

upholds the view that all that happens is equally the expression of an all-determining purpose. Not only in the adaptations of organisms to their environment, and in events which may be interpreted plausibly as "providential," but throughout the whole range of nature and the whole course of history, all events, good, bad, or indifferent, are the expression of one infinitely detailed and comprehensive, and eternally complete divine plan. Another form of extreme finalism is that which is characteristic of an extremely subjective pragmatism, in which it is held that everything is for the individual or for the social group what it is made to be by the purposes of that individual or that group. Both forms of extreme finalism are, from the point of view of critical common sense, highly dogmatic. Moreover, while the former leaves no room, logically, for morality, the latter leaves none for experimental religion.

In distinction from the two one-sided monisms, dualism maintains that these are mechanical events which are in no sense teleological, and purposive events which are not at all mechanical. The Designer is a comparatively late comer into the mechanical order, with the original constitution of which he has had nothing to do. This ancient and supposedly dead and buried religious theory has been resurrected and given a new lease of life in our day, in an effort to find a satisfactory solution of the problem of evil. But such a secondary Power would hardly be an adequate Object of absolute dependence, and, as has been pointed out, the would-be devotee is impelled to seek further, even if it is only for the "veiled Being" that, it is felt, must be beyond any such "finite God".

Suggestive material for a critical monism is found in the vitalism which Bergson defends in opposition to both mechanism and finalism. Apart from all exaggerations both in the content and with reference to the certainty of this doctrine, it can hardly be denied that in the processes of physical growth, regeneration, and evolution, there seems to be a factor at work which is more than mere mechanism, but concerning which we cannot say that it is in itself a consciously purposive performance.[1]

But while vitalism tends to undermine not only extreme mechanism and extreme finalism, but extreme dualism as

[1] The fact that the moral consciousness requires us to interpret human free agency in a vitalistic way lends some colour to the vitalistic hypothesis in connexion with the less developed forms of life It, at least, meets, in large measure, the objection that vitalism violates the principle of parsimony.

well, it does not yet amount to a critical monism. On the problem before us, critical monism by virtue of its constructive spirit suggests that there is perhaps no event in the physical world which does not involve mechanism, nor any event in which, in the last analysis, nothing but mechanism is involved. Will this suggestion stand, in the face of a critical examination of available facts?

The position suggested seems theoretically tenable, at least. An event may be one in which a machine is made use of, but when the user is taken into account, it is readily granted that the act as a whole includes something more than mechanism. What is most mechanical may conceivably be not merely mechanical, and what is most purposive may conceivably make use of mechanism. And there are strands of evidence that go to strengthen the conviction that this theoretical possibility is an actuality. As some recent writers have insisted with much force, the successive stages of cosmic and biological development have been such as we may suppose they would have been if the environment was consciously adapted beforehand to the presence of organic life and to its further evolution; so that it seems not unreasonable to entertain the view that in its general features the universe is the kind of universe a worthy Object of religious dependence might have—and indeed may have—intended it to be. Not only are the mechanical processes necessary to furnish a dependable platform for the activity of life and consciousness; even the processes of physical life, vitalistically interpreted as, on the one hand, not completely predetermined by either mechanism or purpose, and yet, on the other hand, not in themselves definitely purposive—processes which, when so interpreted, seem at first as if they must lie quite outside the domain of teleology—even these may be included under a teleological view. On second thoughts it seems quite reasonable to suppose that these vitalistic processes in the lower organisms were the necessary precondition of the later evolution of beings endowed with creative free agency. And even the fact of evil choices on the part of human free agents may be reconciled with the idea of an all-comprehensive *general* purpose in the mind of a Being to whose will these same evil choices are opposed. If the intention was that men should develop into moral character, it must also have been intended that they should be free agents, learning in the light of the consequences of their actions; and this necessarily involves the *possibility* of wrong choices. For making that possibility an actuality, it is the free agent himself that is responsible.

We now face the problem of nature and the supernatural.

On this topic the possible views may be grouped under four heads, as usual, *viz.*, two one-sided monism (extreme naturalism and the extreme supernaturalism), the corresponding extreme dualism, and a critical monism. But these views have a special relation to the views outlined in connexion with the three preceding problems. The main content of what we have called extreme naturalism is involved in extreme determinism, extreme evolutionism, and extreme mechanism. Extreme supernaturalism, whether it has any representatives among civilised adults, or not, would be a combination of notions approximately represented by extreme indeterminism, extreme creationism, and extreme finalism. To be sure, an extreme indeterminism is not very compatible, from a logical point of view, with an extreme finalism; but extreme supernaturalism is perhaps not a wholly self-consistent system. The vulgar notion of a supernatural event seems to include at once the idea of an intended and creative performance, on the one hand, and on the other hand the notion of something which could neither have been rationally predicted as certain, nor rationally expected as probable, nor even rationally waited for as possible.

Extreme dualism with reference to the natural and the supernatural, or what is often called "dualistic supernaturalism," sums up the three preceding dualisms. It holds that while most events are purely deterministic, evolutionary, and mechanical, there have been and may yet be others of a creative, teleological sort, indeterministic from our point of view, determined only by an arbitrary Will, and making use of no mechanical or evolutionary processes, nor indeed of any "second causes".

Finally, the main features of critical monism with reference to nature and the supernatural are indicated in what has been suggested under this term in connexion with the three problems last discussed. What critical monism here comes to is a natural supernaturalism and a supernatural naturalism. It would maintain that we live in an orderly universe, in which, however, there is ample room for divine and human freedom; in which also origins may be described in terms of creative evolution, and in which mechanical, vital, and humanly purposive processes may all be included in their general character, within one comprehensive plan.

We come now to the much-discussed problem of the One and the Many. Is reality fundamentally one Being, or is it fundamentally many? Here again most views may be grouped under three heads, *viz.*, extreme singularism (a less ambiguous term than the commonly-employed "monism"), extreme

pluralism, and what may be called again an extreme dualism (of the One on the one hand and the many on the other).

Extreme singularism, affirming the ultimate reality of the One, and discounting the ultimate reality of the many, has existed in various forms. Materialists have claimed to hold to it, though perhaps with doubtful justice; atomism, and similar views, taken as a complete metaphysic, suggest pluralism rather than singularism. But spiritualism, panpsychism, and especially metaphysical idealism have exhibited a strong affinity for singularism. Vitalism may also take a monistic turn, as in Bergson; and voluntarism, as in Schopenhauer. But perhaps the most characteristic instance of a monism of the One is to be found in the more neutral singularism of Spinoza, according to whom Reality is to us simply the ultimate one substance, or Being—God, or nature—of which we know only the attributes of extension or thought. Naturally, the religious affiliations of the more typical forms of singularism are with pantheism, and hence with either an extreme mysticism (well illustrated in Plotinus) or with practical irreligion and atheism. For not only does pantheism fail to do justice to the human individual; just because of this it fails in the end to do justice to the divine individual as well. And so it proves unfavourable to the vitality of both morality and practical experimental religion.

Extreme pluralism has denied the reality of any all-embracing unitary Being. Reality, in its fundamental nature, is interpreted as being a manifold of individual material atoms, or of spiritual substances, or of both, or of mutually exclusive systems of experience and thought. Here the tendency is, in denying the ultimate One, to interpret the result atheistically. Sometimes, however, a greatly reduced god is admitted as one of the community or society of spirits.

What we may call an extreme dualism of the One and the many exists in certain more or less deistic systems, according to which the One and the many both exist, but the One is not in any sense to be found in the many, nor the many in the One. The significance of the One for the many thus becomes doubtful, and finally the existence of the One also becomes a matter of doubt. Deism, like pantheism, tends toward atheism and practical irreligion.

In distinction from extreme singularism, with its pantheism and ultimate atheism; from extreme pluralism, with its explicit atheism, and from extreme dualism, with its deism and final atheism, we would suggest again a critical monism, according to which the One and the many both exist, and that in the closest relations with each other, although without

either loosing its identity, or being merged with the other. The One is immanent in the many, and yet transcendent of the many; the many are immanent in the One, and yet in a sense beyond it.

The particular view we have in mind is to be distinguished from a recent attempt to mediate between singularism and pluralism (Royce's *Problem of Christianity*, vol. ii.), in which it is maintained on the one hand that every individual is a community of interpretation (inasmuch as, in interpreting one's self to one's self, there are three distinguishable and ideally different selves, the interpreted self, the interpreter, and the self to whom the interpretation is addressed); and on the other hand that every community, even the universal human community, is an individual (since it also is unified by a mediator, or interpreter, who reconciles individual with individual). Now this levelling down of the distinction between the relation of the "I" to various momentary presentations of the "me" in a personal life on the one hand, and the relation between different persons on the other hand, as if thinking them under the same categories made them for all essential purposes the same, may be permissible for the idealistic way of thinking; but if so, it simply adds charges to the indictment against idealism. It is a fantastic construction, departing widely from common sense, and so not quite the sort of philosophy we are aiming at under the designation "critical monism".

Our point of departure must be the critical realism which was the outcome of our epistemological inquiry, and our position here must harmonise with our position with reference to the problem of matter and mind. We would suggest, then, that the universe of physical energy, with matter as one of its forms, and of psychical activity with its products, together with the vital factor, if there be such an entity in addition, be regarded as activities so intimately co-ordinated as to constitute one dynamic and organic system. The physical and vital factors constitute the Body, of which in experimental religion at its best man is aware of coming into contact with the immanent divine Spirit. Human beings would then be comparable to the organs within the organism, save that their relative independence is even more pronounced than this analogy would suggest. And yet, with all their freedom and relative independence, they are constantly dependent upon the organic One, not only physically, but also, for the highest possible spiritual achievement, religiously as well.

We now come to the last of the metaphysical problems which we shall consider—and it is the culminating problem

of critical philosophy as well as of metaphysics—*viz.*, the problem of the value of Reality, the question as to whether reality is good or bad, or in other words the problem of optimism and pessimism. Here once more we find two one-sided monisms (extreme optimism and extreme pessimism) and an extreme dualism. And we may be expected to be driven once more to search out some satisfying critical monism.

Extreme optimism has existed under several variant forms. Under the guidance sometimes of philosophical theory, sometimes of mystical fervour, it has been maintained that as All is God, and God is good, so All is good; evil is an illusion of mortal mind; whatever is, is right. (Such a position is involved in self-contradiction. It is denied that there is any evil, and it is admitted that there is at least this much evil, *viz.*, the evil of the error in mortal mind, involved in its notion that evil is real.) Again it has been maintained that evil, which is empirically real, is metaphysically a mere negation, or absence of Reality. By others it is admitted that there is real evil, which we must strive against and overcome; and yet, they say, when we come to see this "evil" as it is "in the Absolute," we find that this same evil is a good thing—to overcome! (This may be true of some kinds of "evil," to a limited extent, but not of moral evil. It is only the *possibility* of moral evil, involved as it is for the immature in the possibility of moral good, that is to be consented to as better than its opposite.) Finally, it has been maintained that while the world is not yet completely good, it has been infallibly predetermined to become what it ought to be, and that this will take place in "God's good time," regardless of what man may do or leave undone.

The main objections to all such one-sided optimism, in addition to the criticisms already offered, are that it fails to derive its estimate from all the available facts, but forces an arbitrarily chosen theory upon the facts; and that it tends, both logically and psychologically, to lull and paralyse the moral will. But if one is to be a consistent optimist, one must be able to hold that the truth will act favourably upon the moral will; and so, if extreme optimism is true in this particular application of its teaching it is not true in its general doctrine.

It has been facetiously remarked that a pessimist is a person who has to live with an optimist. There is this much truth in the observation, that an extreme pessimism tends to be begotten of an extreme optimism, by way of reaction. But it is part of the case against pessimism that it is ordinarily regarded as calling for a psychological explanation, rather

than for logical refutation. To the healthy-minded it seems abnormal and morbid.

Hindu religious philosophy has been pessimistic as regards this world and the present life, but it offers a ray of hope in the prospect—not particularly inviting to Occidental minds—of absorption into the One, or a rather negative state of being, in Nirvana. Pessimism as represented by Schopenhauer and Hartmann is more absolute still. Its only Nirvana is unconsciousness, non-existence.

In connexion with the present problem, as in so many of the other questions we have discussed, we find illustrated the old maxim, "Extremes meet". As in the case of extreme optimism, so in the case of extreme pessimism, both religious dependence and moral effort are discouraged. In the one case it is felt that everything has been done already; in the other case it is felt that nothing can be done.

Distinct from both the optimistic and the pessimistic form of extreme monism, there is an extreme dualism with reference to the problem of good and evil. In the older Christian orthodoxy, for example, it was held that for some individuals the outlook into the eternal future was absolutely optimistic, without a shadow upon it, while for other individuals the outlook was absolutely pessimistic, without a single ray of hope.

When we turn to the ways of critical monism, seeking to avoid the extravagances of monistic construction on the one hand, and yet to pass beyond the unsatisfying doctrines of dualism on the other, we find fruitful suggestions in the meliorism advocated by William James. According to this practical and common-sense doctrine, the world contains much good and much evil, and while for the future the good is in danger, it has nevertheless a fighting chance of coming out victorious. Moreover this chance will be distinctly improved, if we devote our best efforts to that desirable end. As James himself indicates, the view is more moralistic than religious.

What we would suggest, however, is, while not a less moral, nevertheless a more *religious meliorism*. Or it may be called a *moral optimism*. While it is only a good fighting chance of success that good has in its struggle with evil, and the best efforts of all moral wills are needed, it is important to note that through a certain dynamic religious relation, the moral will can be greatly reinforced and made more effective in its conflict with individual and social evil. Indeed, if humanity finds and maintains the right religious relation, the destruction of evil will be assured.

In the way, then, that we have here summarily indicated, we would undertake to verify the statement that theology and metaphysics stand in need of each other, and that the outcome of the metaphysical part of the philosophy of religion confirms the favourable verdict with reference to religion at its best, announced at the close of our sketch of the critical philosophy of religion. And with reference to what we have called critical monism, which is more a method than a set of definite doctrines, we would suggest consideration of the question whether it may not be the needed *novum organum* for philosophy, considered not as the love of wisdom simply, but as the best wisdom of the lover of wisdom.

II.—CAUSALITY, INDUCTION, AND PROBABILITY (I.).

By Philip E. B. Jourdain.

The point of view in the theory of knowledge which is associated with the names of Maxwell, Mach, Kirchhoff, Stallo, Hertz, and others seems to have first marked the realisation that the "world" which is the object of physical science is a mathematical scheme whose function it is to imitate, by logical consequences of the properties assigned to it by definition, certain processes of nature. Thus, a very simple mathematical scheme which represents, in some respects, the motion of the earth round the sun is described, in the language of geometry and dynamics,—which is merely a picturesque way of stating purely analytical propositions,[1]—as: a particle moves in the xy-plane with a certain initial velocity perpendicular to the line joining this particle to the origin of co-ordinates, and with an acceleration towards the origin which varies inversely as the square of the distance from this origin. One of the chief innovations due to this point of view was thus the replacement, for all scientific purposes, of the old notion of *cause*, which seems to have been assumed to have something to do with "reality" and yet to have a place in science, by the mathematical concept of *function*. In the first section of this paper I give a somewhat detailed sketch of the replacement, first due to Mach, of *cause* by *function;* of Mach's notion of the law of causality as what we should now—but not what he did—describe as an *a priori* principle asserting a many-one functional correlation between two groups of phenomena, neither of which is the universe; and of what is, perhaps, Mach's most striking contribution to the epistemology of physical science,—the discovery of the logical root of the specialised form of the law of causality known as "the principle of the conservation of energy". The second section is occupied with some account of my work between 1901 and 1911, on the application of logically refined modern mathematical conceptions,—such as those

[1] *Cf.* Section V.

relating to infinity, continuity, and motion,—to the determination of our image of reality. In this work I started from the above results of Mach and applied to them those conceptions chiefly due to Georg Cantor; and, on the appearance of Mr. Bertrand Russell's *Principles of Mathematics* of 1903, I thought it possible to include his discussion of such points as *causality* in the same general point of view. The third section is devoted to Russell's work. About 1912, the apparent importance of what Russell called "the inductive principle," as a foundation for "the law of causality," introduced a modification of his views. This modification implied that my view of causality as a problem of extrapolation which depended on the nature of the functions assumed, and had no reference to the notion of probability, did not go to the root of the matter. However, in the fourth section of the present paper, I think that I have brought forward a rigid proof that the principle of causality is an *a priori* principle which is more fundamental than induction, and the probability on which it depends.[1] This I have done by two lines of argument: firstly, I have shown that, from the point of view of modern mathematics, there is no limitation whatever implied in speaking of anything as a "function" of anything else. Russell has tacitly implied that, when he says that one thing is a "function" of another, he means that the function is of a special nature (analytic, in fact). He cannot then use the fact of this special nature and at the same time deny that that nature is, with him, fundamental. The second line of argument is that the notion of causality appears in the notion of probability, and consequently causality cannot be defined in terms of probability.

Besides this review, and criticism of an attempt to found the notion of causality on that of probability, I attempt, in the fifth section, to give a connected theory of the epistemological foundation of mathematical physics: in it "the principle of causality" is the assumption that there is a certain one-one relation between any group of the images of elements —the images of sense-data—which are fundamental in physical science and the "universe" of them; the principle will be found to be not unplausible and must be *a priori*. It is not asserted that there *is* such an *a priori* principle, but

[1] My friend Mr. A. E. Heath most opportunely warns me that this remark might be taken by some philosophers to imply a "return to active causation," whereas it is nothing of the kind. I mean by "cause" the logically rigorous un-animistic notion used in science. and my discussion has nothing in common with the claim that, since science can only reach descriptive formulæ, science is bankrupt, because real, active causation is the ultimate goal of knowledge.

merely that, *if* there are "laws of nature," they must be *a priori*; for it is, in general, logically impossible to determine a law from a finite number of observations, and "probability," even if it could—which would seem doubtful[1]—serve to bridge over the gap between observation and law, cannot, if we wish to avoid vicious circles, be used to define "causality". Though we may have to assume that there are "laws of nature," we cannot really prove, except by introducing some further hypotheses, that, for instance, the law of gravitation is such a law.

In the coming second part of this paper, I will examine the notion of probability, and will try to prove that it is not a purely logical notion, but itself depends on the particular world with which we deal. In the world which we have the fortune or misfortune to inhabit, the fundamental equations of dynamics determine paths by the method of least squares.

I.

Mach seems to have been the first to show that the concept of *cause* can be replaced by the mathematical concept of *function*,[2] and this replacement has become almost a commonplace to those who are interested in the logical foundations of the science of physics. This was clearly done in a work published in 1872, and in the same book[3] he expressed his now well-known standpoint that psychology, physics, and psychophysics are sets of inquiries into the connexions among themselves and with each other of (1) our presentations, and

[1] In No. 108 of MIND, Mr. C. D. Broad has shown in detail "that the degree of belief which we actually attach to the conclusions of well-established induction cannot be justified by any known principle of probability, unless some further premiss about the physical world be assumed" (p. 389; *cf.* pp. 399, 402), and will maintain, presumably in the present number, "that it is extremely difficult to state this premiss so that it shall be at once plausible and non-tautologous" (p. 389; *cf.* p. 404). The first contention is a welcome confirmation of my views; while I can only hope that Mr. Broad's future arguments will not make me regret that I did not refrain from publishing my attempt at a formulation of an *a priori* law of causality until I could tread in his cautious footsteps.

I hope that I have clearly made out, in my second part, good reasons for dissenting from Mr. Broad's apparently dogmatic view (p. 392) that the "laws of probability are laws of logic, not of nature".

[2] The English translation of the important book published by Mach in 1872 (*History and Root of the Principle of the Conservation of Energy*, Chicago and London, 1911) will here be referred to as *C. of E.*, and Mach's *Mechanics* (3rd edition of the English translation, Chicago and London, 1907) as *M.* *Cf. M.*, p. 555; *C. of E.* pp. 61, 90, 98.

[3] *Ibid.*, pp. 91, 95.

(2) what he called "our sensations" and later "elements,"[1] and what we now call "sense-data" or more shortly, "sensa".

According to Mach, "the law of causality" is "the presupposition of the mutual dependence of phenomena".[2] Again: "The business of physical science is the reconstruction of facts in thought. . . . The rules which we form for these reconstructions are the laws of nature. In the conviction that such rules are possible lies the law of causality. The law of causality simply asserts that the phenomena of nature are *dependent* on one another. The special emphasis put on space and time in the expression of the law of causality is unnecessary, since the relations of space and time themselves implicitly express that phenomena are dependent on one another."[3] This is to go towards showing that "the broad view expressed in the principle of the conservation of energy . . . is a condition of logical and sound scientific thought generally".[4] Yet again: "We have grown used to considering natural phenomena as dependent upon one another";[5] and since "temporal" and "spatial" determinations are, as has been indicated above, merely determinations of phenomena by means of other phenomena, we can eliminate the mention of time and space in Fechner's formulation of the law of causality: "Everywhere and at all times, if the same circumstances occur again, the same consequence occurs again; if not, not".[6]

Thus the law of causality is the supposition that, between the phenomena α, β, γ, . . . ω, certain equations subsist, the number and form of which are to be found empirically;[7] but we can never discover anything which we might try to express by the phrase "the behaviour of the totality of phenomena".[8] Yet immediately after this Mach went on to say: "Let us call the totality of phenomena on which a phenomenon can be considered as dependent *the cause* [of α]";

[1] *Cf. C. of E.*, p. 102, and Mach's *Analysis of Sensations* (2nd edition of the English translation, Chicago and London, 1914), pp. 5, 11, 16-18.

[2] *C. of E.*, p. 61; *cf.* p. 102.

[3] *M.*, p. 502; *cf. C. of E.*, pp. 89-90, 95. *Cf.* also Section V. below.

[4] *M.*, p. 502. [5] *C. of E.*, p. 59.

[6] *Ibid.*, pp. 60-61; *cf.* p. 98. [7] *Ibid.*, pp. 61-62.

[8] *Ibid.*, pp. 62-63. In the later *M.* (*cf.* p. 502), there is, however, mention of the possibility of knowing *all* the values of α, β, γ, . . . As the next sentence quoted in the text shows, Mach's confusion is due to his anxiety to retain the common-sense view that it is not quite *everything* that causes α (for example, my writing this will probably not influence the next parliamentary elections), even when his theory (logically developed, as I shall try to develop it) requires this view to be given up. *Cf.* also *M.*, pp. 224, 233, and *Principien der Wärmelehre*, 2nd edition, Leipzig, 1900, p. 338, note.

then a is determined *uniquely* by the cause.[1] The principle of "sufficient reason," which has often been used by eminent scientific men, is "only another form of the law of causality" (1868),[2] the "inverse of" it,[3] or is not essentially different from[4] that law,[5] "asserts nothing more than that the effect cannot by any given set of circumstances be at once determined and undetermined";[6] and is, like that law, barren in default of positive experiences. The principle of "excluded perpetual motion" is another form of the law of causality: "If a group of phenomena is to become the source of continual work, this means that it shall become a source of continual variation of another group of phenomena. For, by means of the general connexion of nature, all phenomena are also connected with mechanical phenomena, and therefore with the performance of work. Every source of continual variation of phenomena is a source of work, and inversely."[7] Some simple consequences of the phenomena $\alpha, \beta, \gamma, \ldots$ being one-valued functions of $x, y, z, \ldots$ were then deduced, and the facts emphasised that (1) these theorems do not apply merely to mechanics, and (2) the theorems are barren without experiences.[8]

Thus, "the theorem of excluded perpetual motion is merely a special form of the law of causality, which law results immediately from the supposition of the dependence of phenomena on one another—a supposition which precedes every scientific investigation, and which is quite unconnected with the mechanical view of nature, but is consistent with any view if only it [that view] retains a strict rule by laws".[9] This theorem, indeed, is reducible to the purely logical truth that, if $\lambda, \mu, \nu, \ldots$ are one-valued functions of $\alpha, \beta, \gamma, \ldots$ and $\alpha, \beta, \gamma, \ldots$ pass to values $\alpha', \beta', \gamma', \ldots$ so that $\lambda, \mu, \nu, \ldots$ pass into $\lambda', \mu', \nu', \ldots$ then, if the set $\alpha', \beta', \gamma', \ldots$ be brought back to $\alpha, \beta, \gamma, \ldots$ the set $\lambda', \mu', \nu', \ldots$ will return to $\lambda, \mu, \nu, \ldots$.[10]

II.

Thus it is evident that Mach maintained that what he held to be "the law of causality" (a many-one functional correlation of $x, y, z, \ldots$ with $\alpha, \beta, \gamma, \ldots$ was an *a priori* postulate of science. It was from this point of view that I

[1] *C. of E.*, pp. 63-64; *cf. M.*, p. 502.
[2] *C. of E.*, p. 81.
[3] *Ibid.*, p. 65.
[4] *Ibid.*, p. 66.
[5] *Ibid.*, pp. 65-69.
[6] *M.*, p. 502.
[7] *C. of E.*, p. 69.
[8] *Ibid.*, pp. 69-71; *cf.* also *M.*, pp. 502-504.
[9] *C. of E.*, pp. 73-74.
[10] *M.*, p. 503.

began, about 1901, to attempt the formulation of the restrictions on these one-valued functions, as regards continuity, analytic character . . ., which are necessary if the functions are to be employed for certain purposes in mathematical physics.[1] For example, when, in the theory of sound, we pass from a massless "string" loaded with a finite number of masses to the limiting case of a dense and continuous "string," we imply that the construction of the "string" is assumed to be, in general, a *continuous* function of the time.[2] About this time I had become convinced of the importance of cardinal and ordinal investigations of those aggregates D such that the values of a certain function are determined for its whole range of significance,—which is usually wider than D,—when the values of the function are given for D alone. For example, in the case of a real *continuous* function of one real variable, the ordinal type of any D is η; in the case of a real *analytic* function of one real variable, the type of any D is ω.

In continuation of these inquiries I naturally came across the problem of constructing functions of certain kinds solely from their values at an "aggregate of definition," as I called such an aggregate as D; and, for certain large classes of functions, I solved the problem quite completely in a paper written in 1902-3 and published in 1905.[3] It is clear that these inquiries throw some light on the law of causality, which appeared to me to be a problem of extrapolation, and in 1908 I published[4] the first fragmentary results of an inquiry, partly based on the paper to which I have referred, into the possibility of exact formulations of questions in the foundations of physics when use is made of the conceptions introduced by the modern mathematical theory of aggregates.

[1] *Cf.* my article quoted below in the *Monist* for 1908, pp. 222-223.

[2] I think that this problem was the first which I solved in the present order of inquiries. In the spring of 1902, I discussed this question with Dr. A. N. Whitehead, whose lectures on sound and waves at Trinity College, Cambridge, I was then attending; and who was so kind as to be interested in my communication. It was printed in 1908 on p. 225 of the article mentioned in the preceding note. On p. 224 of the same article is mentioned the fact that conditions for the existence of a solution of a system of differential equations provides an answer to a fundamental physical question; and this fact I spoke of to Mr. B. Russell in the autumn of 1902. I mention all this merely to help in showing that my work was initially independent of all but Mach, Cantor, Stallo, Hertz, Voss, Petzoldt, and many mathematicians who wrote before 1901, all of whom are mentioned in my article of 1908.

[3] "On the General Theory of Functions," *Journ. für Math.*, vol. cxxviii., pp. 169-210.

[4] "On Some Points in the Foundation of Mathematical Physics," *Monist*, vol. xviii., 1908, pp. 217-226. *Cf.* also *C. of E.*, pp. 99-101.

III.

The appearance in 1903 of Mr. Bertrand Russell's *Principles of Mathematics* seemed rather to support the view that the foundations of physics were concerned with the determination of the nature of certain functions so as to make possible the validity of—for example—the law of causality. "Causality, generally, is the principle in virtue of which, from a sufficient number of events at a sufficient number of moments, one or more events at one or more new moments can be inferred".[1] This principle seems to be not inconsistent with the one which, as we have seen, Mach accepted as *a priori*: and Russell did not, in this book of 1903, attempt to found this principle on "the principle of induction". This was attempted at a much later date; in the *Principles* there was a rather contemptuous attitude towards induction.[2] Indeed, the *Principles* was written under the influence of the conviction of the irrelevance to the results of logic and mathematics of such things as induction and psychological considerations. Of course, it is evident that this conviction is valid if we are concerned solely with the *subject-matter* of certain discoveries. That is to say, if we are solely interested in the large set of propositions which are logically implied by the small set of premisses which must be assumed as necessary for all thought, and define "mathematics" as this large set, history or the psychology of discovery are as much out of place in mathematics as a discussion of the porridge John Keats ate would be in an analysis of Keats's poetry. And this seems to me to be Russell's point of view. It depends on what is implicitly meant by "mathematics". If "mathematics" means for us, as it presumably did for Poincaré, and does for most mathematicians, a process of discovery, Russell's contempt of history—an account of discovery—is as absurd as Poincaré's emphasis on "intuition" in Russell's view. The bearing of all this on the present question is, I take it, as follows. In 1903 Russell was almost a pure logician, and, when considering dynamics, did not concern himself with the questions as to how we arrived at it and why we believe it to be true. In 1911 and later, as we shall see, such psychological questions appeared, and did, as I shall hope to show, such harm to his logic that extirpation of them is necessary.[3]

When treating dynamics, the abstract case of a swarm of

[1] *Principles*, p. 478. [2] *Cf.* the footnote on p. 11.

[3] I hope that my fears are unnecessary that Mr. Russell will in future find the increasing claims of psychology so strong that he will devote the rest of his life to a history of the Church or a treatise on animal behaviour.

particles was considered.[1] Here the only thing which it seems might correspond to what is called "causality" is the fact that, since the whole path of the swarm is determined by a system of certain ordinary differential equations of the second order, all the arbitrary constants are fixed if we know the configurations of the swarm at any two given instants, and thus the configuration at any other instant whatever is uniquely determined by the above differential equations and the above two fixed configurations. But in this discussion it seems that the question as to what meaning can be given to the word "causality" is implicitly limited to swarms whose paths are defined by ordinary differential equations of the second order, so that there are unanalysed assumptions as to the nature of the functions which give the dependences of the co-ordinates on the time which are fundamental, and that the grounds for generalisation to other physical "swarms" ought to be given. Indeed, Russell[2] himself pointed out, in another connexion, that the current definition of a differential quotient implies that a function, to be differentiable, must be one whose values—both for function and argument—are real or complex *numbers*. Also it is not quite clear why a general property of all integrals of ordinary differential equations of the second order should be called "causal"; it might surely be misleading to talk of "causality" in connexion with a geometrical curve whose differential equation is of the type just mentioned.

Very much the same point of view was repeated by Russell in an article first published in 1912 and reprinted in his recent book called *Mysticism and Logic*.[3] The type of an advanced science was again taken to be gravitational astronomy, in which all the motions are described by ordinary differential equations of the second order. In the dynamics of a swarm of particles, "there is nothing that can be called a cause, and nothing that can be called an effect; there is merely a formula. Certain differential equations can be found, which hold at every instant for every particle of the system, and which, given the configuration and velocities at one instant, or the configurations at two instants, render the configuration at any other earlier or later instant theoretically calculable. That is to say, the configuration at any instant is a function

[1] *Principles*, pp. 479, 480, 481, 486.

[2] *Ibid.*, pp. 326, 330 (see also pp. 468, 480, 483). *Cf.* Section V. below. Since the "continuity" of a function does not, in spite of what Russell maintained in 1903, require that its values be numerical, it follows that the restriction that the functions in the "dynamical world" shall be continuous is not narrow enough.

[3] London and New York, 1918, pp. 180-208.

of that instant and the configurations at two fixed instants. This statement holds throughout physics, and not only in the special case of gravitation."[1] In the formulation of what may be called "the law of causality," which is derived from an abstract dynamical consideration, "there is no question of repetitions of the 'same' cause producing the 'same' effect; it is not in any sameness of causes and effects that the constancy of scientific law consists, but in sameness of relations. And even 'sameness of relations' is too simple a phrase; 'sameness of differential equations' is the only correct phrase."[2] And then: "If the law of causality is to be something actually discoverable in the practice of science, the above proposition has a better right to the name than any 'law of causality' to be found in the books of philosophers. . . . No one can pretend that the above principle is *a priori* or self-evident or a 'necessity of thought'. Nor is it in any sense a premiss of science: it is an empirical generalisation from a number of laws which are themselves empirical generalisations."[3]

The last sentence brings us to the great difference that separates Russell's work of 1903 from, say, his *Problems of Philosophy*, which was first published in 1912. In 1903, all those questions which arise when we inquire what gave rise to the discovery of the principles of a deductive science are put on one side, and the purely logical question of analysis of the results of the science, with a view to the discovery of the premisses, is alone treated. But, after 1903 and before 1912, the motives which gave rise to scientific principles seem to have been considered by Russell as interesting things. Thus in the paper quoted above, we read that "it must, of course, be admitted that many fairly dependable regularities of sequence occur in daily life. It is these regularities that have suggested the supposed law of causality; . . . I . . . do not deny that the observation of such regularities, even when they are not without exceptions, is useful in the infancy of a science. . . . What I deny is that science assumes the existence of invariable uniformities of sequence of this kind, or that it aims at discovering them. . . . In short, every advance in a science takes us further away from the crude uniformities which are first observed, into greater differentiation of antecedent and consequent, and into a continually wider circle of antecedents recognised as relevant."[4] Again, "such laws of

[1] *Myst. and Logic*, p. 194.

[2] *Ibid.*, pp. 194-195; *cf.* the apparently inconsistent remark in Russell's "Lowell Lectures" (*Ext. World*, p. 214). These lectures were given in 1914, *between* the two dates of publication of the above essay.

[3] *Ibid.*, p. 195. [4] *Ibid.*, pp. 187-188.

probable sequence, though useful in daily life and in the infancy of a science, tend to be displaced by quite different laws as soon as a science is successful".[1] The old "law of causality" is not assumed by science, but "something which we may call the 'uniformity of nature' is assumed, or rather is accepted on inductive grounds. The uniformity of nature does not assert the trivial principle, 'same cause, same effect,' but the principle of the permanence of laws. That is to say, when a law exhibiting, *e.g.*, an acceleration as a function of the configuration has been found to hold throughout the observable past, it is expected that it will continue to hold in the future, or that, if it does not itself hold, there is some other law, agreeing with the supposed law as regards the past, which will hold for the future. The ground of this principle is simply the inductive ground that it has been found to be true in very many instances; hence the principle cannot be considered certain, but only probable to a degree which cannot be accurately estimated."[2]

IV.

Thus, Russell's later point of view may, it seems, be described as follows. With regard to the view that mathematical physics is a study of the functions which are—theoretically at least—known for all the values of the aggregate called "the time" when their values for certain aggregates of "instants" are given, it seems that we can only believe that "nature" *is* governed at all times by laws by an application of "the inductive principle".[3] This objection was urged against me in a conversation of 1913, with Russell, when I tried to explain my point of view of investigating the foundations of mathematical physics by determining the natures of the various functions used.[4] But it seems to me that there are two reasons against regarding induction as more fundamental than causality. I will state these reasons in some detail, and it will then follow, I think, that my theory (I do not say "belief" intentionally; a belief seems logically irrelevant) of the universal reign of law cannot be based on considerations of probability. In fact, in the first place, to say that A is a "function" of B does not mean, in mathematics since about 1830, that there is a formula from which, given A, B may be calculated. This is a property of *special* functions; and Russell, by assuming implicitly that his

[1] *Myst. and Logic*, p. 194.
[2] *Ibid.*, p. 196; *cf.* p. 192.
[3] *Cf. Problems*, pp. 98-103, 107.
[4] *Cf.* the second section above.

"functions" are of some such special nature, silently admits my theory while refusing to do so in words. In the second place, the notion of *probability* depends on that of *cause*, whereas Russell would make *cause* depend, through induction, on *probability*.

(1) In the first place, mathematicians have become accustomed, at any rate since the time of Dirichlet, to regard the word "function" as meaning a correspondence between two variables even when the correspondence cannot be expressed by any known combination of known laws of calculation.[1] Thus when we say that, for example, x is a function of t, we do not imply that, when t is fixed in value, the corresponding value of x can be calculated by a formula which expresses the law or combination of laws of correspondence: indeed it can be established by simple arguments of which forms were published by Cantor in 1873, 1883, 1892, and 1897,[2] myself in 1903 and later,[3] and Russell in 1914,[4] that there are functions, in the general sense of the word, which cannot be represented as limits of infinite series of continuous functions. The importance of such reflexions in this connexion is that, when we say that x is a "function" of t we do not imply that x "depends" on t in the sense in which we might say that x "is given in terms of" t by a formula or "law of nature". It might be urged that such a function would be incapable of definition, but this would be a mistake, as is clearly shown by Cantor's method (1892) of defining uniquely a one-valued function which must necessarily be omitted from any one-one correlation of the arguments of this function with the class of one-valued functions possible for the same arguments. Possibly Russell rediscovered the reasons which led d'Alembert, about the middle of the eighteenth century, to maintain that the "arbitrary" functions which appear in solutions of certain partial differential equations obey the "analytic" law of being determined for the whole ranges of their arguments by the fixation of their values for much smaller ranges of these arguments. In any case, in Russell's formulation of the law of universal causation, he proceeds as follows:[5] "There are such invariable relations

[1] There is no more reason for maintaining that an arbitrary sequence of numbers y cannot be a *function* of another arbitrary sequence x than there is for maintaining the falsity of the proposition that any false proposition *implies* any proposition.

[2] *Cf.* his *Contributions to the Founding of the Theory of Transfinite Numbers* (English translation), Chicago and London, 1915, pp. 39-40, 64-65, 82, 171-172.

[3] *Cf. Journ. für Math.*, vol. cxxviii., pp. 177-180, 210.

[4] *Monist*, vol. xxiv., p. 14. [5] *Ext. World*, p. 221; *cf.* p. 219.

between different events at the same or different times that, given the state of the whole universe throughout any finite time, however short, every previous and subsequent event can theoretically be determined as a function of the given events during that time". That there is here an assumption of a certain general property of those functions to which Weierstrass applied the name "analytic" can be proved quite simply by showing that we cannot,[1] if the function is not analytic, deduce the states at all times from the states during some interval of time. Suppose that the state were known to be constant throughout the interval of time from a to b, including the ends: if the function were analytic we could conclude that the state is constant throughout all time; but this need by no means be the case if the function were merely continuous or, say, merely differentiable a finite number of times.

Thus it seems that Russell concealed his assumption that the functions in the law of causality are analytic by refusing the name "function" to a function unless it is analytic. Accordingly, he really maintained—as I did long ago—that our functions must be specialised for every law of causality to hold, but his view was the absurd one that "the principle of induction" is sufficient for this specialisation.

(2) I come now to the objection to founding "causality," through "the principle of induction," on the notion of "probability". This objection arises very simply from the evident reflexion that, as appears obviously in the usual (Laplace's) definition of "probability," this notion implicitly contains a reference to an assumed non-existence of certain "causes".[2] It seems, indeed, that it is when we try for instance, to decide, without making use of the notion of "cause," which—if any—is the "most probable" of various configurations at time t of a physical system, that we meet these "terrible difficulties in the notion of probability" spoken of by Russell.[3] And, as an attempt to define causality in terms of probability is an attempt to move in a vicious circle, we can hardly avail ourselves of Russell's permission to "ignore them at present".

[1] Strictly speaking we should add "always": in fact, the property mentioned belongs to all "monogenic" functions, as Cauchy and Borel have called them; but of them, analytic functions, from the point of view of the physics of the present, seem to form the most important class, while all continuous functions or all differentiable functions, for example, have not the property referred to.

[2] S. Pincherle, *Scientia*, vol. xix., 1916, pp. 417-426; *cf.* my account in MIND, N.S., vol. xxvi., 1917, pp. 243-244.

[3] *Ext. World*, p. 36.

V.

We will now enter on the more properly constructive part of this paper. I will begin by restating shortly some fundamental things in the theory of our knowledge of the "world" as it occurs in science. These things are all, perhaps, fairly well-known, but they are indispensable for my new theory of causality.

In all natural science our aim is to complete facts in thought —whether for practical or purely intellectual ends or both. For this purpose we set up a *model*—a mathematical construction in thought—and so arrange that the logical consequences of premisses in our model should represent—at least approximately—the events which have very frequently followed certain other events in nature corresponding to our premisses, while there are other consequences which represent what might be unobserved events. Thus our model might contain the formula $s = \frac{1}{2}gt^2$, which was found by Galileo in his researches on falling bodies, and which gives results for times at which observations have not, or have not yet been made. We then presuppose that it is possible to complete facts in thought. If this supposition were not true, it would obviously be impossible to have any science which was not merely a collection of descriptions of isolated observations. Since we cannot prove logically the existence of unobserved events which can be deduced without waiting for them, we must *assume a priori* this existence, provided that we have reason to wish to maintain that there are such events; possibly because we are not satisfied that the only possible "science" of the real world around us is the deduction of propositions from a "model" set up by us to imitate things once observed, although there is no reason whatever for believing or disbelieving that these propositions represent completions of facts in the real world.

It was under the assumption that we must know that it *is* possible to complete facts in thought that Russell[1] said that "there must necessarily be *some a priori* principle involved in inference from the existence of one thing to that of another"; but he chose, on the grounds that the formulation of the law of causality seemed to him complicated, and its assumption *a priori* therefore unplausible,[2] that "the principle of induction" is more fundamental. He rightly remarked[3] that Mill's "method of simple enumeration" does

[1] *Ext. World*, p. 223.
[2] *Ibid.*, pp. 35, 223; *cf. Myst. and Logic*, p. 195. [3] *Ext. World*, p. 36.

not invariably give true results, and therefore discovered a way of saying something involving the method of simple enumeration that is invariably true. This discovery was that its "probability" increases indefinitely with the number of instances. Since it seems—and I will try to establish the points in the second part of this paper—that *probability* is not a purely logical concept, but necessarily implies a mental attitude towards what I will call "propositional operations," and further implies a certain limitation on all the functions which the method of probabilities seeks to determine logically speaking this means no more than the platitude: "The propositional function $\phi(x)$, where x is variable, is not true for all x's, but the function 'for every x either $\phi(x)$ is true or not-$\phi(x)$ is true' is invariably true."

But quite apart from this, Russell's argument [1] that causality depends on "the inductive principle" succeeded in seeming plausible only because *time* is introduced. The arguments, I think, would only appeal to those who, like a certain eminent divine, see no reason against the theory that the sun was created at six o'clock on a certain morning long ago. But *time* is merely the dependence of Mach's "elements" on one another, and it is therefore arguing in a circle to maintain that we cannot know that there *are* such functional dependences without the principle of induction.

If, in Russell's definition (1903) of "causality" which we have quoted above, we eliminate the reference to time and space in the manner indicated by Mach, and assume that Mach's word "function" has the meaning *analytic function* which Russell tacitly ascribed to *his* word "function," there seems to be complete identity between the above definitions of "causality" given by Mach and Russell. However, when we are considering the "world" of mathematical physics, we will preserve, in conformity with tradition,[2] a reference to "space" and "time". In mathematical physics, what we do is to consider an aggregate (A) of four dimensions (x, y, z, t) in which each dimension consists of a continuous series of real *numbers*;[3] this "space-time" aggregate forms a numerical picture of what we know in the "real world" as "space" and "time," and seems to be what we may call "absolute"[4]

[1] *Problems*, pp. 93-108.

[2] We will not inquire here whether it is possible to construct a mathematical physics which is not a description of things in terms of lengths. A passage in Mach's *Wärmelehre* (p. 117) indicates that we can represent "characteristics of state" by the elements of our number-continuum in mathematical physics.

[3] *Cf.* Section III. above.

[4] *Cf.* note 16 in *Monist*, 1908, pp. 221-222.

space and time in Newton's sense. With this apparatus of space-time, those complexes of sense-data which we describe as "events in the real world," such as "positions and motions of bodies," are represented by functions defined in the above-mentioned aggregate or "world of physics".[1] If this is the "dynamical world," all "events" are configurations.[2] This aggregate must be numerical if the motions are to be described by differential equations, for the same reasons that, as Russell pointed out, the concepts of differential coefficient and integral imply *numerical* aggregates and not merely any ordered aggregates.[3] Indeed Russell also maintained that the concept *continuous function* necessitated a numerical aggregate for its definition, but I succeeded in 1905 in giving a purely ordinal definition of continuous function. As W. Sierpinski[4] has pointed out, a proof of the equivalence of the numerical and ordinal definitions requires the admission of Zermelo's principle of selection; but, since that principle can now be proved, there seems to be no difficulty in point of principle in replacing the numerical definition by the ordinal definition.

In traditional dynamics, t is independent of x, y, and z; but the theory of relativity requires us to suppose that t is not thus independent. But such questions do not affect the fundamental principles of our setting up, for scientific purposes, a space-time model of the "real world" around us.[5]

The principle of causality, which underlies all induction, is simply a problem of extrapolation: if we consider various particular values of an unknown function of the aggregate A to be given and which represent various events, we have to seek a principle in virtue of which we can conclude the values of such a function at other values of (x, y, z, t). It does not affect the nature of the principle if these other values belong to what we call by analogy the "future" or the "past"[6] of our t-dimension in the space-time aggregate. Of course, if the functions are quite general, no such inference can be made; so that, if such inferences are to be possible, the functions in question must be of such a restricted nature as to allow inferences from values given to values not given. Now, if a function of p, where p is, in a mathematical phrase, an "arithmetical

[1] *Cf. Monist*, pp. 218-221, 223.
[2] *Cf.* Russell, *Principles*, p. 486; *cf.* pp. 468, 480.
[3] *Cf.* Section III. above, and *Principles*, pp. 326, 330.
[4] "Sur le rôle de l'axiome de M. Zermelo dans l'Analyse moderne," *Compt. rend.*, vol. clxiii., 1916, pp. 688-691.
[5] *Cf.* also Mach's note in *C. of E.*, p. 95.
[6] *Cf.* Russell, *Problems*, p. 101; *Ext. World*, p. 224.

point" of A, is continuous and the values of the function are known for any infinite aggregate of values of p, we can conclude the values of the function at every point which is a limiting point of the p-aggregate just referred to. If the function of p is differentiable, the same thing can be done, but we cannot say any more unless we know that the function has other properties besides that of merely being differentiable. But if the function is analytic, then, if we know its values for the set of values of p in *any* "sphere" round some p, we can conclude its value for any other value of p in the domain of existence of the function. If, then, we have reason to suppose that the functions which we assume to lie, as a subject for investigation, at the bottom of natural phenomena are of any special nature, this nature may enable us to give some definite information as to the form in which we can apply induction. *If* we know, in some way or other, that a function is a polynomial of the nth degree,[1] we can conclude that the determination of $n + 1$ particular values determines uniquely the function for its whole course: in this case our function, unlike the majority of even analytic functions, does not require determination for an infinity of values.

If we understand by an "isolated" physical system one which does not embrace the universe and which is not at all determined by that part of the universe outside it, and *vice versa*, Mach's statement of the law of causality comes to the statement that there are isolated finite systems S and that each S may be divided into two groups of elements, $x, y, z, \ldots$ and $\alpha, \beta, \gamma, \ldots$ such that each element of the latter group is a one-valued function of the whole set of variables $x, y, z, \ldots$ so that there is a *many-one* correlation of the group $x, y, z, \ldots$ with each of the group $\alpha, \beta, \gamma \ldots$.[2] If the above division of S is into the class of one (say α) of the elements and the class of all the rest, the latter class, less any elements, if there are such, on which α does not depend and which do not depend on α, may be called "the cause of α". We shall have to remove some contradictions in this theory.

(1) Strictly speaking, there are no isolated systems. There are systems which are *practically* isolated, and the discovery

[1] *Cf. Monist*, 1908, pp. 225-226.

[2] That the correlation is *many*-one was explicitly pointed out in the last paragraph of p. 70 of *C. of E.*, and again, still more strongly in *M.*, p. 503. In the *Wärmelehre*, p. 325, the special case of this correlation being one-one is alone considered, although there is not any logical necessity for ϕ to represent a *one*-one, rather than a many-one, correlation in order to allow us to conclude, from the premiss that $\alpha = \phi(x, y, z, \ldots)$, that purely periodic variations of $x, y, z, \ldots$ do not determine permanent alterations of α.

of such systems is one of the most important aims of natural science.[1] But this aim is not the question here: we are concerned with the logical question as to whether we can make the image of reality we use in physical science into what Hertz called a "permissible" scheme, by all the refined tests that modern mathematics and logic can give. "The cause of a" then strictly embraces the "universe of physics".[2] Further, a must of course be a *complex*.

(2) If causes had many-one, which were not one-one, correlations with their effects, there would evidently be two different complexes u and u' of elements which would be "causes of a". Let v be the common part, if any, of u and u', and denote the other parts by "$u - v$" and "$u' - v$"; then the complex (v, a) must be the cause of the different complexes $u - v$ and $u' - v$. Hence we could always find a cause with a one-many, which was not a one-one, correlation with its effect, and this is contrary to the hypothesis. Hence, if an effect is determined—and thus uniquely—by its cause, the correlation must be one-one. Thus, a must—if the universe consists of more than one thing—be a complex which "mirrors" the universe. Thus Mach's formulation cannot be accepted except as an approximation. As was indicated above, in the account given by Mach of the functional dependence of changes in a portion of nature on changes outside that portion, the functions in question were, since Mach never concerned himself with the more exact aspect of mathematics, many-one, and consequently he was forced to admit that there are strictly, as there appear to be, actual cases[3] in which a certain phenomenon B can vary without a corresponding variation of the phenomenon A, although to different A's correspond different B's.

Thus the principle of causality may, it seems, be stated, without the use of the notion of probability—which, even if we do not admit its non-logical nature, is at any rate an undefined idea—as follows. Firstly, let us call a "portion round (x, y, z, t)" of the "world" formed by our model, a closed and everywhere-dense (in the language of the theory of point-aggregates) aggregate of four dimensions to which the point $p = (x, y, z, t)$ is interior. Then we assert that there is a one-one correspondence between the physical system π contained in any portion P of this world and that formed by the whole of the external world, so that any change in the portion considered necessarily implies some change in all the rest. What

[1] *Cf. C. of E.*, p. 64. [2] *Cf.* Russell, *Ext. World*, p. 226.
[3] *M.*, p. 503.

is meant is that, strictly speaking, nothing in the world of mathematical physics can change without everything else also changing; of course we so arrange that this world closely imitates the world around us in that the influence of changes within a portion rarely conditions great changes in very distant portions. This condition sounds vague, but, as anyone who has had to formulate properties of rapidity of convergence to a limit will easily see, this vagueness is not essential, and we can formulate the condition in logical terms.

The consideration of a case in abstract dynamics will help us to realise that the suggested principle of causality is not really paradoxical. Consider two gravitating spheres, of masses m and n, which are in contact through a compressed and massless spring which tends to force them apart. Suppose that the spheres and the spring are the only bodies in the universe, and that we begin to consider them when the spring is forcing them apart. Now, however small n is as compared with m, the common centre of inertia of the two spheres remains fixed; so that, if the smaller one moves towards, say, the origin, the larger one moves in the opposite direction. If, then, the actual world is very like its image in dynamics, we see that, for example, the whole earth moves even if a small portion jumps at the surface of the earth. Such instances take away the appearance of paradox in the principle of causality formulated above; and the paradox is still farther removed when we remember that, for practical purposes all of what we call "very minute alterations" may be disregarded. Thus, although strictly speaking the correspondence between the variations in any portion and those in the whole is one-one, for practical purposes we may regard the correspondence, with Mach, as many-one and say that changes may possibly take place without any (perceptible) alteration in most other things. This comes to the same thing as pointing out that there are "practically isolated systems".[1]

[1] *Cf., e.g., Myst. and Logic*, pp. 197-198; *Ext. World*, p. 226.

(To be concluded.)

III.—THE SYLLOGISM AND OTHER LOGICAL FORMS.

By H. S. Shelton.

I. Philosophical Introduction.

I do not know to what extent the views put forward in this article are new. It has always seemed to me that in logic, as apart from the extension known as methodology, I have been restating only very slightly modified what I had thought to be the traditional view. But I am unable to say where the traditional view is to be found. Scholastic logic undoubtedly is best entitled to the name because it has for centuries preserved continuity. But, on any particular question, if you enquire closely enough, scholastic logic explains itself by scholastic philosophy, which none but the schoolmen accept. Here modern logic differs. It has no philosophy; there are only the views of this or that philosopher. Moreover, the modern tendency has been continually to focus attention on the metaphysical side where there is no agreement, rather than on the more strictly logical side where some degree of solidity can be attained. Hence if I am asked at any point why a certain view seems to me to be traditional, I cannot, unless it is accepted by scholastic philosophy, give any satisfactory answer.

In the following exposition, as I shall show by footnotes, I shall be found to be in agreement with various logicians on various points. But, on the main question, namely, the enquiry what is and what is not a valid logical form, and what relation there may be (if any) between the syllogism and valid forms other than the syllogism (if any), I cannot anywhere find a clear systematic and consistent view.[1] I can therefore only say that the origin of this statement is the

[1] The question is slightly treated in Keynes' *Formal Logic*, pp. 385-389. Coffey, *Science of Logic*, vol. i., p. 385. These writers give general references to Whately, De Morgan, Venn, and others. I have not thought it profitable to follow back all these references, but readers who think it worth while may do so for themselves.

discussion which has been running in MIND since 1914, and that I am more or less indebted to all who have taken part, together with one or two correspondents, in that their contributions or letters have suggested to me that this or that point is worth discussing. Amongst these I have found Mr. Alfred Sidgwick's syllogistic statement of the *a fortiori*, communicated to me in a private letter, of exceptional value.

It is desirable to preface this logical essay with a short explanation of the philosophical standpoint which lies behind it. This is the more necessary because so much of present day logical theory consists of such discussions. Such assumptions as I have to make at the outset would be described by many as epistemological. Although I think it absurd to subdivide philosophical discussion into arbitrary branches as if it were exact knowledge instead of a medley of learned opinions, the distinction may be of service here in that it enables me to make it clear that the views I am expressing rest on a particular description of what we are doing when we make a deduction and are independent of why deductive reasoning should be what it is.

This view of the nature of deductive reasoning I have previously put forward on more than one occasion.[1] But, to avoid continual back references, I have thought it well briefly to restate it. The reasons I cannot give in full, although I shall presently give some. For others I must ask those sufficiently interested to refer to previous work; but the view itself I will endeavour to make clear.

The view is that when we make any deduction whatever, small or great, concerning any question of material fact, our so doing involves three processes: (*a*) We abstract from reality concepts of the aspect with which we are dealing. (*b*) We reason with regard to these concepts by means of some universal rule, true or false, expressed or implied. (*c*) We refer our conclusion back again to reality, and it is only when we have done so and empirically verified it that we can be sure that our conclusion is materially true. Process (*b*) only is the true sphere of formal logic. For this strict and invariable rules can be formulated. Processes (*a*) and (*c*) are empirical and fall within the extension known as methodology. This extension is of greater consequence in scientific work than elsewhere, but the empirical element is always found in practical reasoning.

The acceptance of this description is consistent with

[1] See "A Theory of Material Fallacies," *Proc. Aristotelian Society*, 1911-1912; "The Limits of Deductive Reasoning," MIND, Jan., 1912, also, on the nature of axioms, "Evolutionary Empiricism," MIND, Jan., 1910.

various metaphysical interpretations. You may with the schoolmen say that the truth shown by reason is the highest form of truth, and that empirical or material truth lies on a lower level. You may with various schools of metaphysicians postulate that reality is rational, in which case reasoned conclusions, and general truths are more real than empirical reality. You may, with the pragmatist say that the value of reason depends entirely on its practical working, and you may define practical in any way you please. You may with Bergson say that reason is merely an instrument of survival, and that real truth is to be found in intuition. For myself I cannot understand this curious inversion nor see why, if reason is merely an instrument for survival, intuition is anything else. But none of these controversies really matter here. So long as it is admitted that the process I have described is what actually takes place in deductive reasoning it is more or less irrelevant how these and other characteristics of reasoning are explained.

Having thus cleared the ground, it will be convenient to give a short explanation of the three characteristics of deductive reasoning on which I have laid stress, and to put forward such reasoned defence of them as is possible in an introduction to the main subject of the article. Let us consider them seriatim :—

(*a*) We abstract from reality concepts of the aspect with which we are dealing.

I shall best explain this by the illustration of the method of Euclid. Although for pedagogic reasons it is desirable to preface strictly rational geometry by a practical or empirical treatment, nevertheless it is only the euclidean method that can correctly be described as deductive reasoning. This starts with strict definitions of the meaning of terms, and it is immediately apparent that what we are reasoning about is not empirical reality, but abstractions or concepts. Points, lines, triangles in the euclidean sense do not exist. In reasoning on the subject of lines we are concentrating attention on one aspect only of any real object, namely, distance in one dimension. Our conclusions are true of that aspect only, and are true of any material reality only in so far as other aspects do not affect our conclusion. I mean, in short, that any deduction is absolutely valid only with regard to the concept used.

It will be seen that the same process occurs in the formulation of any term. A description of any article as a chair, inkstand, bridge, implies an abstraction, a concept. So far from the concept being a complete description, which it is

impossible to make, it is not even an attempt. All aspects except a very few are deliberately ignored. Any term is, in short, a concept. What our principle really implies is the formal or symbolic nature of logic. Indeed I do not see that the two terms have any different meaning.

It will be convenient here to deal with the confusion of thought on the subject of symbolic logic. All deductive logic is symbolic and cannot be anything else. A concept is a symbol, what else can it be? Why logicians do not recognise this I do not understand. The recognition of the principle implies no opinion of the system of notation now in vogue yclept symbolic logic.[1]

On this matter I may be allowed at once to express the opinion that it is of very little value for logical purposes. Judging the logical value of symbolic logic by results, I have never yet seen a proposition proved by its aid which could not be proved much more simply by ordinary methods. Whether or no it may have value in elucidating the foundations of mathematics I cannot here discuss. This uncompromising expression of opinion concerning its logical value may, however, convince readers that the recognition of the conceptual or symbolic character of deductive reasoning does not imply the desire to substitute for formal logic any mathematical treatment. I am merely here putting forward what appears to me to be a fundamental truth concerning the nature of reasoning.

(*b*) We reason with regard to these concepts by means of some universal rule, true or false, expressed or implied.

It is desirable to make this point as clear as possible before proceeding to consider in detail the syllogism or any other special logical form. Also, as the term universal can have various shades of meaning, I have completed the description by calling it a universal rule. This does not necessarily imply the universal proposition of the logical text-books. It merely implies that we cannot make any deduction from premises, and say that our deduction is formally or absolutely valid, without implying that some rule is absolutely or universally true. This rule is so ingrained in modern logic and has been so thoroughly expounded in previous numbers of MIND, that

[1] I find that Mr. Russell is in agreement with me on this point. "Symbolic or formal logic—I shall use these terms as synonyms—is the study of the various general types of deduction. The word *symbolic* designates the subject by an accidental characteristic, for the employment of mathematical symbols, here as elsewhere is merely a theoretically irrelevant convenience" (*Principles of Mathematics*, p. 10). I should like to substitute *inconvenience* for the last word in the quotation.

I do not propose to argue it *de novo*. Nearly all formal logicians admit it. Mr. Alfred Sidgwick agrees, and even Dr. Schiller, so far as I know, does not disagree. I am well aware that so great a logician as Mill disputed it, but even Mill can occasionally be shown to be wrong by subsequent work, much in the same way as Newton has been found to have misinterpreted the phenomena of light. The opposite view, in the light of present-day discussion, appears to me to be mere confusion of thought. I will put here a simple exposition, the very hackneyed *a fortiori* will serve very well as an illustration. From A is greater than B and B is greater than C we infer that A is greater than C. The question can be put, Do we consider the inference absolute? If the reply is no, the answer is that the form is invalid. If the reply is yes, we have asserted a universal rule. To avoid all verbal quibbles I will express it as follows—When A is greater than B and B is greater than C it invariably follows that A is greater than C. If this is not a universal rule, what is? I do not mean that a universal rule obtained in this short and easy manner is suitable or convenient for any system of formal logic. But it does show that we cannot make any deduction and call that deduction valid without implying a universal rule. We make a deduction only because, consciously or unconsciously, we consider some principle to be absolutely or universally true. Whether or no any treatment of formal logic requires a preliminary admission of the use of universals more detailed or specific than this I do not know. For my purpose I hope to show that the admission of the truth even in this crude and obvious form will suffice.

(*c*) We refer our conclusion back again to reality, and it is only when we have done so and empirically verified it that we can be sure that our conclusion is materially true.

I wish to guard against being understood by this principle to assert more than I actually am asserting. It is necessary again to emphasise what I have already said concerning the scope of this article. The whole argument is a methodological description of the process of formal reasoning as applied to material reality, and is not a metaphysical essay. In asserting this third principle generally instead of specifically I should find myself involved in a metaphysical scepticism and be at variance with the whole body of scholastic philosophy, which, unlike modern philosophies at present in vogue, is at least sufficiently intelligible and coherent to be treated with respect. I will therefore say at once that I express no opinion whatever on whether or no there is a sphere of certain truth which can be attained by the exercise of human reason. The school-

men (and some of the moderns) think that when by the exercise of reason we have attained certain conclusions, such as the existence of God (I express no opinion as to whether the line of reasoning which leads to this conclusion is valid) which conclusions are not empirically verifiable in the ordinary scientific sense of the word, they can be accepted as absolute truth and that a superstructure can be built upon them. All this I have no intention either to assert or to deny. I merely wish to point out that such a treatment requires a definite metaphysical assumption, or act of faith, whichever you like to call it, and with such I am not concerned. I am treating logic entirely scientifically, as an instrument towards the attainment of what we may describe as empirical truth, and should only be at issue with philosophers if they extended their sphere of certain truth to the ordinary empirical plane.

Indeed to be slightly irrelevant, I may mention that I have on various occasions expressed opinions which go some way to meet their view. I have strongly asserted that such truths as the axioms of mathematics and the fundamental ideas of space and time have truth and validity entirely superior to and independent of empirical investigation. I have pointed out that we fit our empirical truths to our axioms, not our axioms to our empirical truths, and, following Spencer, I have attempted an explanation on evolutionary lines. Nevertheless, those who disagree, and like Dr. Schiller hold that axioms are merely postulates, will not find the difference material so far as this essay is concerned. If they admit that we do in fact reason through universals, it is allowable to hold any opinion concerning the nature of these universals.

What I am wishing to emphasise strongly is that the sphere of deductive reasoning, of formal logic, is not the sphere of empirical reality, and that logical conclusions require empirical verification. Deductions, whether short as in logical reasoning, or long and intricate as in mathematical treatment, are "in the air," and their empirical truth can only be established by subsequent verification. This leads at once to the well-known question whether a logical argument is a guarantee of empirical truth. Of course it is not. This would imply that the concepts abstracted from reality are all that reality, which *ex hypothesi* they cannot be. There may always be some factor ignored or forgotten in formulating the conceptual picture which affects the result and vitiates the conclusion. I cannot see either why this should be a concession to any one or discover who has denied it. If we consider the matter speculatively, the wonder is that logical reasoning so generally leads to materially correct conclusions rather than that occasionally it may give a materially false conclusion.

Having explained these three main principles as fully as possible in the space at my disposal, I now propose to indicate that one or two questions often discussed by philosophers and logicians are laid to rest when this simple description is accepted and thoroughly understood. For example, on the question whether or no formal logic is really worth studying I will merely remark that, apart from a purely theoretic interest, it depends entirely on whether or no we consider process (*b*) of sufficient importance to be worth systematic treatment. The principal difference between myself and Mr. Alfred Sidgwick is that while he thinks the process to be an insignificant and negligible part of thought, I place upon it a higher value. In order for him to substantiate his view of the uselessness and futility of formal logic it would be necessary for him to assert that we never, except in mathematics, perform any deductive reasoning of consequence and that in such as we do perform there is no reasonable possibility that the uninstructed will commit any serious error. I am entirely with him in that he has, in his *Application of Logic*, pointed out the importance of the processes which I have labelled (*a*) and (*c*). Those who think that they are of no consequence will do well to refer to his book. But his estimate of the significance of deductive reasoning and of the truths which he recognises concerning the use of universals is entirely unintelligible to me. Possibly Dr. Mercier's emphatic statement that he really believes in the direct deduction of particulars from particulars may convince Mr. Sidgwick that there is some value in the systematic treatment of deductive reasoning. In spite of our difference on this important point, I think we are agreed in the main on the general nature of deduction as applied to material reality.

Another controversy which I have dealt with on a previous occasion I wish to mention now because it will be relevant when I deal later on with propositions. I refer to existential import. I have never been able to see how formal logicians can find any existential import whatever in the terms of logical propositions.[1] The controversy whether a proposition implies the existence of its subject, its predicate, both or neither, and the very tedious side-issue concerning universes

[1] My view may be described as compounded of Venn's emphatic assertion that, whatever may be the case with ordinary logic, there cannot possibly be any existential import in symbolic logic and Russell's view that all formal logic is symbolic and that the use of mathematical symbols is a mere accident. Dr. Wolf also has arrived at a similar conclusion, though I do not think that either of us agrees with the line of reasoning by which the other has reached the conclusion.

of discourse has occupied so many pages of works on formal logic that it must have had some intelligible origin. What the origin is I have not been able to discover, nor have I anywhere found any sufficient reason for adding to logic a chapter which can so easily be chosen by opponents of formal logic to exemplify their view that logic is a silly and meaningless game. If anyone does not realise the formal character of deductive logic and thinks to include in logical sentences all the nuances and implications of everyday parlance, it is quite intelligible that such a question may arise. To any such it will be a sufficient reply that on this assumption there is no possibility of obtaining propositions with a fixed and limited meaning, and consequently rigid deductions are not possible. Deductive logic vanishes into chaos and valid reasoning with it. So far as I am aware no one explicitly maintains this view and I am inclined to regard the discussion as confusion of thought.

On the hypothesis that deductive logic is formal and that our logical terms are symbols or concepts, no question of existential import arises. Concepts are—concepts, and may be concepts of anything you please, material reality, imagination or nothing at all, in which case the argument is merely form without matter, like the S, Q, P, of the textbook. Obviously the form of the proposition gives no guarantee from what the concepts are abstracted. The subject and the predicate are clearly both existential and both non-existential in precisely the same sense and to the same extent. They are both existential in that the presence of a concept is identical with the existence of a concept. They are both non-existential in that the *form* of the proposition cannot indicate to what (if anything) the concepts or symbols refer. The controversy absolutely vanishes.

The only attempted answer to this argument appears in Keynes,[1] and his argument is that the form no A is B implies the non-existence of A-B. The implication he regards as what I may describe as non-existential import. But this appears to me to be a confusion worse than the last. In the first place it is not import but formal deduction. Also it does not seem to have any bearing whatever on the existence of the *terms*. Again I should demur that the inference can hardly be described correctly as existential. What is really inferred, if we remember the formal character of deductive reasoning, is that A-B is a contradiction in terms. If I start with the proposition that a cat is an animal with four legs and a tail, I prove that a Manx cat is a contradiction in terms.

[1] *Formal Logic*, p. 212.

I do not see that it helps us in the least to say that the Manx cat does not exist in the universe of discourse. On the other hand, to take an A-B combination, it would be interesting to know how the non-existence of a round square gives us any information concerning either the existence or the non-existence of a round or of a square. In formal logic, if you wish to assert either existence or non-existence in any definite sense, you must *explicitly* assert it in the premises.

One other preliminary matter that remains to be dealt with is to show the unreality of the distinction sometimes drawn between formal and material logic. This distinction is not so prevalent now as it was a generation ago, but it is not sufficiently extinct to render all reference superfluous. The distinction between formal and material fallacies is valid because mistakes are possible both in the process of reasoning itself and in the material application of the conclusion. But there is and can be no material logic. All deductive reasoning, whatever the subject matter, must be formal; all application must be material. In any course of reasoning on material questions both elements exist. These two elements should be carefully distinguished, and can be described in various ways. I hardly like calling them deduction and induction. One reason against this description is that the term induction is used in various senses. The old induction by simple enumeration of a limited class and the induction of algebra are really deduction. Moreover, the name induction, bearing this history, is liable to suggest that the process, like deduction, is capable of strict formalisation, which is of course wholly impossible. I have myself described the two processes somewhat loosely as the logic of thought and the logic of science, but do not maintain the terms as scientifically accurate. They are too reminiscent of formal and material logic. The modern description of logic and methodology seems to be the best. The term logic should be reserved for the formalisation of deductive reasoning, methodology for the study of the methods of attaining material truth, which designation clearly implies, what it should imply, that the processes are not capable of strict formalisation. Whatever the terminology may be, however, one thing must be made clear. In all attempts to attain material truth, both elements exist. What has been called induction often contains many deductions small and great, simple and involved. So far as these occur, they are formal in nature and can be described by the ordinary system of deductive logic.

II. Arguments and Verbal Forms.

There is need of a brief section to fill a hiatus which occurs in textbooks of logic and which has seldom been explicitly discussed. It is obvious that systems of formal logic differ from the arguments of ordinary life in that ordinary arguments are various and indeterminate in form. A system must state them in some recognisable form or forms. Therefore there arises the problems (*a*) whether the necessary paraphrase is possible; (*b*) how it can be performed.[1]

Neither of these two questions can I treat exhaustively here, nor do I propose to submit any elaborate proof of (*a*). What I am specially concerned to point out is that before you take a single step in any system of formal logic you make certain preliminary assumptions. I wish to state explicitly what those assumptions are, and I hope it will be clear that throughout this essay I do not in my treatment of logical forms do more than make in a slightly different way the assumptions that any formal logician is bound to make. It is clear and obvious that a *system* of logic, or indeed any exact and scientific treatment, must formalise. Without formalisation the apparent obviousness of an argument is sometimes delusive. A is next to B, B is next to C, therefore A is next but one to C, seems conclusive unless we carefully define our terms, and then, unless we define them arbitrarily with the special object of making the argument correct, it is found to be a non-sequitur. A is a mile from B, B is a mile from C, can easily by careless thought give other than the only valid conclusion A is *not more than* two miles from C. I should be interested to know what conclusion can be drawn from A is near B, B is near C. We must therefore conclude that a distinction can be drawn between a valid argument and a valid form. I do not think we can deny to an argument in which after full consideration we are convinced that the conclusion follows inevitably from the premises the title valid. The argument A is a mile from B, etc., appears to me in that light. But if we stop there and thus make personal idiosyncracy the only test of validity, no system of logic is possible, nor indeed is reasoned argument. An argument is to you or me valid if we think it so, but unless we can state it under some recognised form it must be called formally invalid. It does not necessarily follow that a formally invalid

[1] I gather from Mr. Sidgwick's review in the January number of Mind that Mr. Rieber, whose book I have not read, does actually discuss the question of paraphrase as indeed does Mr. Sidgwick himself in his books. Such a discussion is very rare indeed.

argument is not valid. Any argument can be stated in a formally invalid way. But unless we are able to state an argument in a form generally recognised, there must always remain a doubt whether or no some obscure factor has been overlooked.

Granting the necessity of recognised forms, there follows the necessity for paraphrase, and once again we encounter a process for which no strict rules can be given. Let us take a very hackneyed example. I submit the argument—Socrates is mortal because he is a man and men are mortal. For formal syllogistic validity the argument must be amended to *all* men are mortal, etc. The addition is easily justified. We can say, "Do you *mean* that *all* men are mortal? If the answer is yes, why not say so? If the answer is no, the inference is invalid." Even in so simple a case it is obvious that to obtain any logical form we must take liberties with the words of a proposition as stated in ordinary parlance. Once granting so much there can be no limit to the process so long as the paraphrase does not assert more than the original statement. In ordinary life we should probably say Socrates is mortal because he is a man; and so the process of reducing to syllogistic form, or to any other recognisable form, is still more troublesome. What I am here so specially concerned to point out is that if you are willing in this instance to admit that the universal rule all men are mortal is the real ground for the inference as elliptically expressed, it is not reasonable to object to a similar search for the hidden universal in cases when it is not so obvious. Also it is clear that the necessary paraphrase must sometimes extend so far as to supply a proposition which the original argument entirely omits.

Paraphrasing, therefore, theoretically, presents no difficulty; practically, should logic be used to test the validity of ordinary arguments, it is a very important element, and, moreover, one in which many errors are likely to occur. This subject is worthy of extended treatment which it is not possible to attempt here. But the few remarks made in this essay may answer one or two objections that have been made to traditional logic. By clearly recognising that syllogistic logic is formal and that ordinary arguments must be paraphrased into syllogistic form, we cease to be surprised that ordinary arguments do not assume this form, and that the syllogism is not the most natural form of expression. Rule of thumb is always more natural than scientific work. The old-fashioned nurse naturally prefers the elbow to the thermometer. For practical purposes it would be pedantic to attempt to reason

in syllogisms. It is only when a doubt arises whether some argument is invalid that it is practically desirable to express it formally. Then it often would be of great service. In everyday reasoning it not infrequently happens that absurd arguments are put forward which arise from the unconscious assumption of concealed universals which would be repudiated by the authors if explicitly stated. Thus it happens that the most important item in the paraphrase is often to supply the universal which, in common parlance, is often not expressed at all. Also, in common parlance, several steps in reasoning are often merged into one and it is then necessary to disentangle them. Considerations such as these are, in the ordinary treatment of logic, implicitly assumed. I have thought it desirable to state them explicitly.

One other corollary that follows from the admission that paraphrase is allowable, is that the distinction between the various forms of universal propositions, categorical, hypothetical, modal, etc., must be regarded as irrelevant to formal deduction. As I have previously pointed out, when we translate the verbal form of everyday argument into symbols, which is exactly what the formalisation of an argument implies, the nuances and shades of meaning of common parlance disappear. For symbolic purposes the phrases: all men are mortal, man is mortal, if A is a man he is mortal, are identical. The hypothetical may at first sight seem to mean less. But the symbol A implies that whatever is substituted for A is included in the predicate; therefore for symbolical or formal purposes it is identical with the ordinary categorical. There is ample room for the discussion of the delicate shades of meaning which may be implied in the various forms of speech, but it is necessary to state emphatically that formal deduction can take no account of them. Here, again, as in the discussion of existential import, it is important to realise that formal deduction can be made only from what is explicitly stated. Neither existential nor any other import, except that which is formally stated, can have any place in a system of logic.

III. The Syllogism.

I think it will now not be necessary to labour the conclusion that every valid argument can be expressed as a syllogism, indeed that every argument, valid or invalid, can be expressed in the form of one or more syllogisms. This follows from the two principles already laid down (*a*) that every argument implies the assertion of a universal; (*b*) that for purposes of

formal logic any paraphrase is allowable which does not assert more than the implied universal. Any universal can therefore be expressed in the form, all A is B, or, no A is B. Making the universal the major premise, the minor premise is usually apparent and the syllogism is complete. If the argument is false, the error may either be formal or material, formal if the figure and mood are invalid, material if the premises are false or ambiguous. The statement here made must be clearly understood. It is that any argument *can* be expressed syllogistically. It does not assert that the syllogism is the most natural form. It does not even assert that the syllogism is the best form for the particular argument. But it should be noted that what is asserted is all that is required for the purposes of formal logic, namely, to supply a mode or form in which all valid arguments can be stated. As previously argued, there is no reason why the form should seem natural nor why it should not, from the point of view of everyday custom seem strained. Its object is to formalise and verify, not to displace ordinary rough and ready argument.

Taking the syllogism as the primary form, it is desirable to investigate the question whether, like the great bulk of everyday arguments, the syllogism itself, in its very form, does not contain some hidden universal. If it does so the universal should be explicitly stated and should be clearly grasped as the principle that lies behind all valid reasoning. Fortunately traditional logic has treated this subject fairly exhaustively and has based the syllogism on the *dictum de omni et nullo*. The principle has been expressed in various forms. A very common one, that of Keynes,[1] is: "Whatever is predicated affirmatively or negatively of a term distributed is predicated in like manner of everything contained in it".

This form is fairly satisfactory but I propose to improve the wording. It is neither elegant nor strictly correct to say that anything is contained in a term. I will therefore state it as follows: "Whatever is asserted distributively of any class is asserted of every member of that class". Stated in this simple form I am unable to see the least difference between asserting or predicating distributively of a class and asserting or predicating the same thing of every member of the class. The principle, when reduced to its simplest form, seems to me to be a tautology. I do not propose to dogmatise on this point. If the statement is a tautology the syllogism contains no hidden universal, and the major premise is the only universal involved. If on the other hand there is a universal

[1] *Formal Logic*, p. 301.

hidden in the form of a syllogism, it has already been asserted and is so obvious as to appear very like a tautology. Either conclusion will suit the argument of this essay very well.

A side-issue arises here that should be noticed. I think that some logicians have been loth to admit that the *dictum* is a tautology because of the impression that it necessarily follows that the syllogism itself is tautologous. But with this inference I do not agree. Whether or no a syllogism gives new information depends entirely on the particular syllogism.

E.g., all the planets are bodies which revolve in or near the plane of the ecliptic—Saturn is a planet.

Therefore Saturn is a body which revolves in or near the plane of the ecliptic.

This syllogism is undoubtedly tautologous because the major premise or universal can only be obtained by simple enumeration. Until we have by observation discovered the path of every planet we are unable to assert the universal. Even on the nebular hypothesis we can only postulate on antecedent probability, and, as is well known, the orbit of the Moon is in a different plane. There is therefore nothing in the nature of a planet which necessitates that it should revolve in any particular plane. On the other hand the hackneyed example : —all men are mortal, Jones is a man, therefore Jones is mortal—is in a different category. Assuming Jones to be now alive the deduction is as yet unverified so far as he is concerned. In any case the premise cannot be established by simple enumeration because there are a considerable number of men now alive. The only possible ground for the assertion of the universal is inferential and must take the form that there is something in the essential nature of humanity which is mortal. This is called by many logicians a modal proposition. Man as such is mortal. My contention is that only a syllogism of which the major premise is modal can give new information. All others are tautologous.[1] Certainly it is not allowable to make the dictum appear less obvious than it really is in order to attempt to give to some syllogistic deductions more reality than they possess.

The absence of a concealed universal which can be clearly distinguished from a tautology is one good reason for doing what is being done here, taking the syllogism as the primary form of reasoning. In so doing I do not assert that it is impossible to invent an alternative system or systems. There may be a certain arbitrary element in the choice. But at

[1] This is in agreement with Coffey.

least it can be said that no alternative system has been invented which has similar advantages or any approach to similar advantages.

The following additional reasons for accepting the syllogism as the standard mode of formal logic will show how much has to be accomplished by anyone who seeks to displace it by any other system or systems.

(1) Every deductive argument can be expressed in syllogistic form, that is, stated in one or more syllogisms.

(2) Every valid argument contains within it, expressed or implied, a universal. Every syllogism contains a universal. There is, therefore, though no necessity, an antecedent probability that the syllogism may contain the universal really implied in the argument. If the paraphrasing is carried out with judgment the syllogism *will* contain some form of the universal implied by the argument.

(3) The syllogism is the traditional form of logic. If it is desired to change the tradition, the burden of proof lies with those who advocate the change. So long as the syllogism will do all that is required of formal logic the change is unnecessary. Unless some other system will give equally good results in a simpler manner, the change is harmful.

IV. Other Logical Forms.

The point has of late been raised that for some arguments, apparently very obvious, and undoubtedly true inferences, the syllogism is not a natural form. Indeed it has been suggested that the universal expressed as the syllogistic major premise is "faked". I think I shall be able to show that in every case there is a principle involved, a real axiom. The objection that the syllogism is *unduly* strained and unnatural I propose to meet by a method which is, so far as I am aware, original. I suggest that a few other forms be recognised. These forms I shall designate as subsidiary and shall derive them from the syllogism.

Before so doing it is desirable to refer to the only alternative suggestion contained in textbooks of logic and give reasons for not accepting it. Keynes [1] regards the essential difference between the syllogism and other logical forms as a question of the copula. According to his view the syllogism is the form with the copula "is". The treatment of forms with some other copula he calls the logic of relatives, of which he regards the syllogism as a particular case. This treatment I believe to be fundamentally unsound.

[1] *Formal Logic*, pp. 385-388.

The reason will be apparent to those who have grasped the second section of this paper. Whether you express a proposition A – is – greater than B, or A – is greater than – B is entirely a matter of convenience. By all means let us call the verb to be a copula if it is necessary to name it. But it is foolish to think that we make any difference either to the content of a proposition or to the inferences that can be drawn from it by drawing straight lines in different places. The term *is greater than* undoubtedly implies a certain relation between the entities placed before and after. Also the inferences that can be drawn depend upon the relation. But we can only discover what those inferences are by considering the meaning attached to the words, in short, by examining the particular proposition. This cannot be attained by any mechanical juggling with the words of the copula. Assuming that there are a number of reasonably possible logical forms of which the syllogism is one, the form of the copula appears to me to be an entirely illegitimate differentia.[1] The essential nature of a proposition is that something is predicated of a subject, and anything predicated can be expressed with the verb to be as the copula. No other so-called copula can be universal, any other merely expresses a special relation. The designation of such as copulæ is misleading.

In the manufacture of subsidiary logical forms it is essential to note one peculiarity. In the form of the syllogism, if we agree that the *dictum* is a tautology, there is no assumption of material truth. It is purely a form and the truth of the conclusion depends solely on the particular premises employed. Every other form, unless it be the syllogism in disguise, implies, in addition to its premises, the assertion of some universal as absolutely true. It consists in short of an elliptical argument of which the major premise is omitted. "Jones is mortal because he is a man" can well be taken as an illustration of what these arguments really are. The formal recognition of arguments such as these can be justified only by common usage and only then when the universal is so obvious, so ingrained in the nature of thought itself, that continual explicit assertion is pedantic. For this very reason it may sometimes be difficult to express it and occasionally it takes careful reflexion to see that an assumption exists. It will now be convenient to treat two or three seriatim.

(*a*) *Hypothetical Syllogism.*—The name is unfortunate because it is neither hypothetical nor a syllogism. As explained previously there is a sense in which every argument

[1] Keynes here refers to Venn's *Symbolic Logic*, but I believe that most modern symbolic logicians treat the matter in an entirely different way.

is hypothetical, apart from this the hypothetical form is an illusion. It is not a syllogism because the major premise is not explicitly stated and because a term of the minor premise has irrelevantly become entangled in the elliptic statement. Yet the argument, in cases where it is real instead of nominal, is essentially the same as the syllogism and it is not easy to think of a better name. As previously explained for purposes of formal logic, the form if A is B it is C implies merely that anything which is B is C or all B is C.[1] The more complex form if A is B, C is D, asserts in other words that all instances of A being B are instances of C being D. There is no need to elaborate the treatment of this form. Jevons'[2] analysis, which Mr. Sidgwick has also found in Whately, is perfectly sound. Instead of reducing the hypothetical to the syllogism it is merely required to reverse the process. Unless the form had already existed and been recognised by common usage the derivation would not have been desirable. If this animal is a mammal its backbone is jointed, merely implies that all mammals have jointed backbones. It also gives the irrelevant information that a mammal is an animal, and in addition, wastes space and attention by mentioning a particular animal about which it makes no specific assertion other than that it is an animal, which is irrelevant. The universal is implied but not clearly expressed. The only ground for the recognition of this form is found in the fact that it is traditional, and in that careless reasoners in common life do often express themselves in forms bearing some resemblance to the so-called hypothetical. When they do so they are liable to commit the common fallacies of denial of the antecedent or assertion of the consequent. There is therefore something to be said for the recognition of a logical form to classify and guard against these fallacies.

(*b*) *Substitution of Similars.—Axiom.*—Entities that are respectively identical with the same entity are themselves identical.

Paraphrase and Introduction of Symbols.—Entities – A,C –

[1] There is an apparent exception to this rule. I might say, "if *that* bright object is not a star it is a comet". This implies that all objects having certain undefined peculiarities indicating amongst other things that they are beyond the atmosphere of the earth, are either stars or comets. The real universal is then not all B's are C's but all B's of a certain class are C's. Such an argument is almost too elliptical for formal treatment in that the ground of the inference is a very complex and unexpressed analysis of B's. It is one of the disadvantages of this form that it can so easily include arguments of very different types.

[2] See chapter in *Elementary Lessons.*

which are (identical with) the same entity B – are (identical) – A is C – .

Form.—Note that the words in brackets are omitted, and that the relation of identity equivalent to the Hamiltonian form, all A is all B, implies that the relation can be written either way.

B is A ; B is C ; therefore A is C.

Example (taken from a previous discussion in this journal):—

St. Paul's is a cathedral church
St. Paul's is a church that Wren designed

therefore a church that Wren designed is a cathedral church, or Wren designed a cathedral church.

The axiom is very obvious indeed, but it should be noted that it is not a tautology. However clearly it may be implied that two things which are identical respectively with another are themselves identical the two assertions are different, therefore the axiom is a true axiom. The axiom is, however, so very axiomatic that once stating is sufficient and so the form is justified. A further justification of the form is found in the fact that arguments of this character are very common in ordinary life. If the explicit recognition of a subsidiary form is ever needed this is undoubtedly the instance which best illustrates the utility of the device.

(*c*) *A Fortiori.*—The previous exposition will have cleared the ground, and so it will not be necessary to devote much space to this example of reasoning. I am here mainly concerned to point out two things : first, that there is a real universal involved, and second, that the apparent obviousness of the inference from particulars, though accidentally true in this instance, may be very delusive. As previously explained the *a fortiori* is a relation, and each relation must be examined separately and its implications discovered. It is impossible to express them in a general form. Let us take as our two premises the following :—

A has a specified relation to B
B has the same specified relation to C.

Clearly no inference is possible. We can only enquire what relation is meant and reserve inferences until we have *thoroughly* examined the particular relation and discovered the universal through which we are reasoning. There are a considerable number of relations which when substituted for the general form will give as an inference A has the same relation to C. There are a much larger number that do not In a specially obvious case it is easy to allege that there is

no universal at all and that we reason only from the particulars given. The only possible reply is that if we do so we reason wrongly, and that any such inference is invalid. It is quite easy by such a type of reasoning and by a similar exercise of uncritical common sense to make a bad blunder. The following will illustrate. Let us take as our definition of East or West the particular meridian of longitude, and ignore small differences of latitude, which definition is in accordance with common usage, and consider this inference :—

Bristol is West of London,
Penzance is West of Bristol,
therefore Penzance is West of London.

It seems an obvious inference but it is entirely wrong. It is certainly true that, according to definition, Penzance *is* west of London. It is also true that the fact is a possible inference from the relative positions of London and Bristol, and of Bristol and Penzance, *if sufficient data be given.* But it does not follow from the premises. The real universal is complicated and I do not propose to unravel it. That the inference is *formally* wrong will be seen by the following :—

London is West of Yokohama,
San Francisco is West of London,
therefore San Francisco is West of Yokohama,

which is, of course, not true. The only manner of establishing the true inference from relations of east and west is to formulate the universal and see whether the apparent obviousness remains obvious when this is done.

The universal implied in the *a fortiori* I will say at once is to me entirely obvious. At the same time universals which seem to me equally obvious have been denied by competent mathematicians and logicians, and I see no reason why some one in the future should not deny even to this the attribute of absolute truth. What is assumed is that, as we ascend the scale of size, the scale is continuous and irreversible. Anything which is greater than another is greater than anything than which the other is greater. This axiom at the present time no one will dispute. But it does not appear to me one iota more obvious than the corresponding property of the scale of distance. Assuming that we start from any point in a straight line and continue in the same straight line it seems axiomatic that we get further and further away from our starting-point. Now this inference Mr. Russell denies, because he thinks it theoretically possible that space may be circular or elliptical. Why should it not be equally

possible for some ingenious mathematician to deny the *a fortiori* and found a new branch of mathematics involving skew numeration or a metageometry of number corresponding to the present fashionable metageometry of space? Of course I should think the development very absurd, but then I hold precisely the same opinion of present-day metageometry. I am putting forward this idea, not because I think it reasonable, but to show that the universal behind the *a fortiori* is a real assertion of something and a denial of something else. What we assert in the *a fortiori* is that the relation of number (and others grouped in the term greater than) is not a relation like East and West or like what Mr. Russell thinks distance in space may be.

Having made that point clear, the formalisation is simple. I will ask all to bear in mind what has been said about paraphrase. Without this assumption no logic is possible. Granting this the form will be derived as follows:—

Axiom.—All things which are greater than any particular thing are greater than those which it is greater than.

Paraphrase.—All things (A) which are greater than a particular thing (B) which is greater than a second (C) are greater than the second (A is greater than C).

Form.—When A is greater than B and B is greater than C, then A is greater than C.

(*d*) *Other Examples.*—It is now superfluous to say much about other relations. Clearly they can all be treated in the same way. If this method were carried out, you could establish as many forms as you pleased. Every separate relation must have a separate form. It is possible that, by classification, the number might be reduced. What I mean is, that if any new relation be contemplated—say A is less than B, etc.—two processes would be possible. It is theoretically possible to show that a new relation is a particular case of an old one, in which case it would be classified under a subsidiary form already established. The substitution of similars, based on the principle of identity, might be made to include a number of minor relation which assert not absolute identity, but partial identity. The euclidean axiom of equals is a cogent example. Also the *a fortiori* in that it has a number of significances, to all of which the fundamental universal applies, might be extended to include a number of relations. The greater than, and the less than, in that the one implies the other, might be amalgamated.

This is probably the grain of truth that lies behind the idea of the logic of relatives, namely, that a number of relations can be classified together. But, from the standpoint of formal

logic, this is not a *logic* of relatives but an examination and classification of relatives. It is in short an elucidation of axioms and a series of assertions concerning material truth.

Apart from a possible amalgamation only one process is valid, namely, to consider the relations separately and to elucidate exactly what is implied by each. Having done this express the implication as a universal; then manufacture a form which will be available for logical purposes. It seems entirely unnecessary to put forward other examples. Also, it will be seen that there very soon ceases to be any advantage in departing from the syllogistic form.

With the subsidiary as with the primary or syllogistic form, all the characteristics of formal reasoning as here described hold. The subsidiary form differs from the primary or syllogistic form in that it assumes some definite universal as absolutely true. In so far as it does this it is at a disadvantage compared with the primary. Nor does it appear that it can exist without the *dictum*. If what is predicated generally by A, B, C is not also predicated of anything we can substitute for these symbols no inference is possible. Whether or no this be so, it must be clearly emphasised that a subsidiary form, in that it is a form of reasoning, is conditioned by all the limitations of the primary form. The abstraction from reality, the paraphrasing the necessity for empirical verification, equally apply.

V. Conclusion.

It is now desirable briefly to sum up the conclusion of this article. It would be easy to magnify the importance of the section which is most original, namely, the derivation of subsidiary forms from the syllogism, and to lay claim to having made a great discovery. Considering the volume of discussion from all schools of logicians which has centred about one or two erratic forms, I certainly think the suggestion worth a place in formal logic, but I do not wish to exaggerate its importance. Its value seems to me to be found in the support it gives to traditional logic rather than in the addition that it makes thereto. The last thing that I should wish would be to see that item unduly developed. Possibly later on I may indicate just how far I think it should be developed and where it should stop.

So far as that section is concerned its value is twofold. On the one hand it indicates the possibility of forms other than the syllogism existing and serving a useful purpose; on

the other hand it shows how fundamental in the process of reasoning is the syllogism, and elucidates more clearly than has been shown before exactly what is meant by the continual assertion of so many generations of logicians that all true reasoning is syllogistic. The view has been expressed so often, and is so very traditional, that it is liable to be asserted mechanically without adequate comprehension of what it really means. Indeed in this conclusion I propose to go a step further than I have gone in the discussion of the details. Throughout the essay I have left it an open question whether or no the order indicated here is the right order. I have done so knowing that formally or symbolically it is possible to create various orders, and to classify the syllogism as one of a number of valid modes. But although I have not insisted on it and do not claim to have proved it, I think it well to say here that I *do* think that the order here suggested, the syllogism primary and other forms secondary, is *the* right order. I do, moreover, claim to have shown that the other forms *can* be derived from the syllogism, and that their existence is no disproof of the traditional view of syllogistic reasoning. I have also, I think, shown clearly how strikingly the syllogism exemplifies the necessary and fundamental characteristics of reasoning.

Important as these matters are, it is not these particular features that seem to me, in the present state of logical discussion, of the greatest significance. What has always struck me about the present state of logical theory has been its confusion on fundamentals. Logicians never seem to have made up their minds whether or no logic was a formal science or in what sense. Sometimes after emphatically asserting that it is formal they will include elements which are clearly inconsistent with their starting-point. It is this topic with which I am specially concerned.

I have tried to show that there is a sense in which all deductive reasoning, whether the rough and ready product of ordinary life or the more exact deductions of logic and mathematics, is and must be formal. The truth is more readily seen in mathematics, because in that science the chain of reasoning is long and involved and a continual series of formal deductions can be made without intermediate reference to empirical reality. This element of mathematical reasoning I have explained on several occasions with the special object of showing its limitations. In logic it is equally important to emphasise this truth but for a different reason. In everyday life and ordinary argument the various elements are so entangled as to obscure the essential characteristics of reasoning.

It is thus all the more important that logic shall emphasise the aspects which the average man is liable to overlook. A logic which imitates the confusion of ordinary parlance and entangles the various elements of deductive thought and empirical reference is neither sound theory nor efficient practice. Valid logic has room for all the elements which appear in logical discussions, but only if we clearly realise exactly what we are doing at each stage. As a starting-point it seems to me essential clearly to grasp that deduction is formal and that a logic of deduction must be formal. The recognition of this characteristic carries with it certain corollaries, and nothing tends so much to confusion as the non-recognition of the implications involved in the assertion of the formal character of logic. If logic is formal it *is* formal and all non-formal elements must be excluded from this particular phase.

It is hoped that this essay will help to show in what sense the formal science exists and to indicate both its uses and its limitations. No doubt its sphere is not so great as its most extreme advocates have contended, yet it seems to me much more significant than its opponents have realised. What has made attacks so easy and so formidable has been this confusion among logical thinkers. Once they have clearly realised what exactly are the distinct elements of logic and methodology and when they are dealing with neither but are straying into metaphysics, some of the problems now so widely discussed will settle themselves. I am not deprecating metaphysical discussion as such so long as it is clearly recognised for what it is, but at least let us keep it as distinct as possible from what should be a science which can exist with the minimum of metaphysical assumption. Similarly the standpoint of the present essay is diametrically opposed to those who seek to establish a psychologic. The term to me is meaningless, as meaningless as psychomathematics. The essential nature of deduction is that it is largely independent both of metaphysical discussion and of psychological details, and is the same for all. This character will be clearly recognised when the various elements of what to-day is known as logical theory are disentangled. The present essay is intended to do something to achieve that object in that it clearly distinguishes formal deductive logic from the diverse elements and metaphysical discussions with which it has been associated.

IV.—DISCUSSIONS.

"THE BASIS OF BOSANQUET'S LOGIC."

In view of Mr. L. J. Russell's paper in the October Mind, I should like to explain what I meant in my *Logic* by speaking of a reference to reality as involved in all hypothetical judgments.

I am the more desirous to do this, because I may have contributed to some misunderstanding by the length at which in that work I pursued some discussions which were really subordinate, though illustrative of the main contention, and to me extremely interesting.

After briefly setting aside the references to four of these discussions, I believe that I shall be able to state shortly what I take to be the fundamental difference between Mr. Russell and myself on the main issue, and to justify my position.

i. I discussed at length the question how far an affirmative hypothetical judgment asserts the existence of an object corresponding to the idea which stands in the place of a subject to it; *i.e.*, whether the judgment is false if or when no such object exists. This is the discussion (*Logic*, i., 181 ff. and on part of p. 273) referred to by Mr. Russell, pages 441-442 and 444. It suggests, I think, to Mr. Russell that the important question for me is "whether the antecedent exists in fact" (444). But this was for me a question, I might almost say, of curiosity and the use of language. A supposition is illegitimate—I sharply distinguish the case—not if the antecedent is non-existent, but if its nature is such as would destroy the system indispensable to conceiving it—the system which I may call the surviving reality, *i.e.*, the reality which in normal cases persists beside the modifying supposition. The examples criticised on page 447, such as that of a moral being alone in the universe, are instances *ad hoc* of this relation, and are not illustrations of my general argument. They follow on the discussion of the existence of subjects (*Logic*, i., 273). I am distinguishing between a supposition which replaces a subordinate element in reality by another, and an "impossible content" which shatters the system, which it implies, into unintelligibility. This distinction, I think, meets Mr. Russell's point that a completely determined actual system must reject *any* supposition whose antecedent does not exist (444). I only require the supposition to be conceivable, not to confine itself to an existent antecedent.

ii. I discussed at length whether a relevant factor of the

premisses of inference could be omitted in the conclusion (*Logic*, ii., 11, Mr. Russell, p. 446), and pointed out that in the case of supposition though "we seem to exert inferential activity," yet we cannot draw a conclusion which will stand by itself, as we do in syllogism. All I meant was that the two results of the inferential activity seem to need to be brought into line. I did not connect its reality with the reality of the ground. I inclined to the conclusion that our practice in syllogism is what needs revision. But my expression was misleading and I regret it.

iii. I discussed whether inference in a quasi-syllogistic form [looking as if it were subsumptive] could at the same time be apodeictic, and I concluded that it could. If it were to be taken as truly subsumptive, I think I was wrong. The apodeictic insight would exclude the subsumptive relation, although it remains true that the factual nature of the system would raise no difficulty in the way of the former. I was urging that the factual reality of the ground does not interfere with the necessity of the conclusion; not that it is essential to it.

iv. I may add that I do not now restrict myself to *de facto* teleology as the highest ground of inference. It is, I think, a very strong case of knowing the nature of an object from the inside. It illustrates Croce's principle of *verum factum*—we know the truth of what we have made. But I do not accept that principle as universally true, and certainly not as the exclusive account of truth. I ought never to have taken the case as more than an illustration of very full knowledge.

I think that from these four discussions Mr. Russell has gathered an idea that the relation to reality which I hold to be involved in inference from supposition has to do with the real existence of the content supposed as antecedent, in the hypothetical judgment which draws the inference. "On his premisses," he writes, "if the judgment is to be genuine the new matter must be real" (445). "The result, then, of Bosanquet's theory is that only the real—the actual, the existent as truly interpreted, can have being in the strict sense, and can form the subject of judgment" (436). The "new matter" is, as I understand, the matter which is supposed in the antecedent of the hypothetical judgment; the clause which is introduced with "if". To my mind this is irrelevant.

2. Now where I admit that Mr. Russell does traverse my essential argument is first in the anticipatory statement on p. 437, "in his account of the element of fact in judgment we shall find a transition from 'posited system' to 'real system' depending on arguments which we shall have to reject"; and in the argument in support of this statement, beginning with p. 446 and the footnote, and continuing over the three following pages. I quote from p. 448: "We should, therefore, conclude that every judgment is relative to some system, whether real or supposed, which is sufficiently complete to render the judgment necessary; for we hold that it is possible to construct various systems of this kind without finding

it necessary to draw on any unspecified portions of reality. If we specify the precise portions of reality on which we are drawing, then not reality, but the system we have specified, is the ultimate subject of our judgment." The last sentence is particularly noteworthy, and we shall find it, I think, untenable.

Mr. Russell thinks that you can draw conclusions from contents which are merely "posited" (supposed), and that they need neither be real (I disclaim saying that they need be) nor have any basis in reality. Here, I join issue. For him, the only question is whether you suppose *enough* to make a whole which is sufficient as a basis for your judgment. (Footnote, p. 446 and pp. 447-448 especially *l.c.* and, commenting on my instances of illegitimate suppositions, "*in all these cases we are not supposing enough*". His italics.) If you suppose *enough*, you need borrow nothing from actual reality, and your judgment does not depend upon it in any sense or degree.

Now my primary answer, which is given I may say in the whole structure of my *Logic* and notably in the discussion of supposition and of the basis of the hypothetical judgment (i., 266-267, 271-272) can be stated in four words. Judgment *must* transcend supposition. It is so simple and fundamental a matter that it is, certainly, difficult to explain further. It is a question of the distinction between two absolutely incompatible logical functions.

Make a supposition, as complex as you please; say, consisting in the total rules of a game like chess or noughts and crosses. Put into it everything you think necessary to determine the consequences you mean to draw. So far, of course, you have no affirmation, you have only a very complex antecedent of a hypothetical judgment, without any consequent. So long as you are merely supposing, the data or contents you suppose, one might say, lie dead side by side. They do not combine or affirm anything about anything; they do not modify or confirm one another or exclude one another or the consequences of one another.

But now make a judgment, draw a conclusion, affirm consequential bearings of one supposed element on another, *e.g.*, that given certain suppositions, certain alternatives are possible or impossible. It is clear, surely that now you have done something quite new. You have, so to speak, infused the life of reality into your suppositions. It is like the nursery story, "The cat began to bite the rat"—the train of consequences begins to affirm itself. The contents of supposition wake up and begin to operate in the spirit of the laws of identity and non-contradiction. You begin to infer from the joint world of supposition and reality as in categorical inference you would infer from the real given world. You are drawing, that is, on the whole of what is in reality, of what may prove to be relevant anywhere in the universe, to sustain your conclusions, and you are challenging it to contradict them. Your supposition when it has been allowed for can draw no magic circle by which anything further in the universe can be barred out.

In other words, every judgment is inherently absolute. "How so, when we are expressly speaking of such as are conditional?" I answer, it is just the explicit condition which makes the judgment as such absolute. The explicit condition, by being stated, is discounted or transcended. It exhausts the conditionality of the assertion. When it has been allowed for, then, we are *ipso facto* saying, there is nothing else in the world that can interfere with the truth of the judgment. We are postulating, that is, that, whether all the ways are known or some not known, in every relevant way the universe supports our judgment.

If this were to be denied, as I hardly think it can be, it would no doubt be difficult to prove. One would have to appeal to the obvious implication of the judgment form. If there is anything necessary to its truth (or any hindrance to its truth), then that we intended either to insert (or to remove) in the explicit formulation of its condition or to postulate as the indispensable belonging of such a judgment. Otherwise we could not propound the assertion as true. Its truth would be liable to be interfered with by some just cause or impediment. Every one would admit, I suppose, that if a condition could be pointed out indispensable to the truth of our judgment, but unspecified in its explicit antecedent and not otherwise guaranteed, the uncertainty of such a necessary condition must make the judgment doubtful. And this establishes the point that when conditions are specified and conclusions drawn from them, the resulting affirmation presupposes *all* conditions, known or unknown, indispensable to its truth, and therefore claims a support from the real universe which cannot be measured or limited.

Now an indispensable condition of a conclusion from any world of contents is at the very least what I have called the life of reality; that is, the unity which constitutes a world, typified by the laws of thought, and by all such characters and categories of reality as may be employed in the suppositions in question. Mr. Russell manages to rule out space and time from the antecedents in the game of noughts and crosses; and more easily we can rule out the existence of persons able and willing to play the game. These reductions are quite feasible; but it is significant that they *are* subtractions from the natural implication of the supposition, and that they are necessary if we are to get conclusions from it without the most obvious dependence on reality. But still we should have to recognise as a basis the "laws of thought," *i.e.*, the coherent life of the universe, and at least the most formal properties of things, identity and distinctness and the rest, on which I think it is admitted that all mathematical truth reposes.[1] And perhaps more properties are involved than these. Perhaps the numerical system is not completely (though it may be provisionally) conceivable apart from distinctive quality, nor this, again apart from the whole concrete universe. In any case finally, when we have drawn a conclusion from anything

[1] Whitehead, *Introduction to Mathematics*, chap. i.

about anything, we have demanded support and challenged contradiction from anything relevant that the universe may anywhere contain.

I am exceedingly interested in the way out of this reasoning which Mr. Russell adopts. Dozens and dozens of times I have tried it myself. And of course I do not say but that he may succeed where I have failed. I will tell my story, and the reader must judge.

He urges, I "have not supposed enough". If your suppositions cover all you want to determine your object, then you can draw your conclusions from them without appealing to actual reality. This is so, we are told, in geometry (p. 446, footnote, *cf. l.c., supra*, "A genuine supposal if completely expressed must stand the test of self-containedness".

Here I always found two difficulties.

First, in principle, can any perfection of self-containedness cancel the contrast between supposition and judgment? Is it not inevitable that whereas the supposition "stays put" as you took it, the judgment, in virtue of the very spirit and laws of thinking, appeals to confirmation or challenges contradiction by whatever may be relevant in the universe?

Secondly, the manœuvre by which Mr. Russell tries, as I have often tried, to escape from this necessity, inevitably, so I have always found, brings one back to the ordinary partial supposition, obviously based on a surviving reality which it modifies.

The manœuvre is this (see *l.c., supra*, from p. 448). You note certain factors of the real universe, of the nature of things, such as the "laws of thought" and the formal properties indispensable as the basis of mathematical reasoning, and probably other characters, according to the nature of your inference, together with the general assent or non-contradiction of the real universe. All this you may *include in your supposition*. Then you go on to say, "Now my supposed world *is* a world by the hypothesis, and works as a world, for I have supposed the life of reality to be in it. And it cannot fail to work as a world, for, tell me any character of the real universe which you think indispensable to my inferences, and I will include it in my supposition. So that my supposed world *must* include in itself, without any general appeal to reality, all of reality that is necessary to my drawing my inferences."

But at this point in the manœuvre it used to occur to me, "but can I really transform the function of supposition into the function of judgment by increasing the complexity of the former?" And it would seem on scrutiny that now, under cover of supposing, I am really recognising and postulating. I am ostensibly including in my supposition certain elements of the real universe; but I do it, not because they are factors indispensable to the unique determination of the imaginative structure which I am creating, but because I recognise them as elements of reality which, very likely along with others of which I am not aware, are implied in the

function of judgment which is the operation by which my conclusions are drawn.

Therefore, after all, in trying to suppose *enough* I have only set myself a task which cannot be achieved by supposition. My ostensible supposition falls into two parts. First, there is the side of genuine and normal supposal. I am positing such rules or data—wholly arbitrary so far as fact is concerned—as I desire to consider in their consequences and to make the basis of my game. As Prof. Hobson, I think, has said, and Mr. Russell implies, a science such as mathematics may be looked at as just such a game. But then secondly there is the element of what I should venture to call abnormal and controversial supposal. I am including in my supposition, of *malice prepense*, those factors of the real universe which I recognise as indispensably implied in the function of judgment when occupied in drawing the consequences of such a world; factors which it would never occur to me *bona fide* to include in the determining rules of my game, such as the laws of thought and more or less of the properties of real things, together with the general condition of favourableness on the part of the universe in matters which may be unknown to me.

Now this second factor of so-called supposition is not genuine supposition. It is recognition or postulation. It is not, in such a case, on the basis of my supposal that I am inferring. If it were, I could suppose these factors to be otherwise and modify my inference accordingly. But these factors I cannot suppose to be otherwise for they are the basis of implication, and if I did I could draw no inference at all. They are the implications *ad hoc* of a function —the judgment—which as we saw, makes an absolute claim to be true of the real universe when its conditions are once accepted.

It is the same case as if we tried the same manœuvre with any single partial supposition, by supposing, say, that I go to town today and act in a certain way, and then further professing to *suppose* that the world goes on otherwise as usual, and nothing happens to interfere with my acting in the way first supposed. It is obvious that the second part of the so-called supposition is an appeal to the actual nature of the world, apart from which and unsupported by it the earlier portion could give no result. Our attempt to suppose *enough* has resolved itself into just such a spurious extra-supposition. It is parallel to the postulate, on which every conclusion from inductive experiment depends, that the huge unknown environment, which no possible contrivance can exclude, is irrelevant to our inference, or, if relevant, favourable. These are not suppositions, but assumptions about reality, and to take them as absolute is indispensable to making judgments which claim to be true.

I believe, therefore, that this way out is a cul-de-sac. However plausible it may seem, there are two ultimate difficulties which cannot be got over: (i) Whatever suppositions you may lay down, you can use none of them to draw conclusions except by a function

of judgment which brings them into relation within reality. You could not reject a self-contradictory supposition by *supposing* the law of non-contradiction. The one *qua* supposition is as good as the other. It is only when you come to judge of reality that you are compelled to employ the law of non-contradiction as ultimate, whether you have supposed it or not.

(ii) Every judgment, just because, after its conditions are made explicit, it is absolute and universal in its challenge to reality, is conditional on the unknown. It asserts itself to be unconditional, but obviously, for this very reason, its truth depends on the absence of hidden obstructions in the universe of unknown reality. Every judgment must transcend supposition.

"And hence," Mr. Russell says on page 445, "not reality, but some form of reality as modified by the supposition, would be the ultimate basis of such a judgment." I agree to this, and I do not see that it involves me in any difficulty. The suppositions are explicit; "the surviving reality" is to some extent known, or I could not use it in judgment. It operates as a universal in the new matter of the supposed content which is read as one case with it, as Mr. Russell has described on pages 444-445. Why should it not? Only because I am supposed to hold that the new matter must be "real". But I have explained that I do not hold this. What I do hold is that the "new matter" must be intelligible in connexion with a real system, because, if not, you cannot judge about it.

Thus from my point of view it is not correct to say that "the exploration of a relational system must take the system in some one particular setting" (437). This assumes that you can establish relational systems pure and unattached, and then move them about from setting to setting. It is not setting, but indispensable basis that my view demands; or setting, if you like, *qua* basis and indispensable to the system. You can only judge a relational system, *e.g.*, draw conclusions about the alternatives it permits, on the basis of the reality which survives in it, including at least "the laws of thought," *i.e.*, the ultimate factual characters of things. If I was wrong, *e.g.*, about the character of actual space being represented in Euclidean geometry, it makes not the least difference of principle. All mathematics admittedly reposes on the ultimate formal characters of things, not to mention the general presumption which as we have seen is involved in all judgment as such.

To elucidate the operation of the "surviving reality" in the most completely imaginary of creations I recur to the example of artistic fiction, on which I laid stress both in an earlier discussion and in the *Logic*.[1] In a work of artistic imagination, though you could hardly conceive a supposal more complete and self-contained, yet at every point the creative thought is determined by a "surviving reality," and the degrees in which the consequences of the suppositions are moulded by the universal of this reality operating within the imagined content illustrate every possible relation of

[1] *Logic*, i., 274; *Knowledge and Reality*, 140 ff.

supposition to its basis in reality. This is what is referred to when we speak of the fundamental truth of poetry or fiction—truth to philosophical insight, to life, to dramatic character, to the laws of artistic coherence. The reality lives and operates in the supposition, and is expressed *mutatis mutandis* in every judgment to which the suppositions can give rise.

Part D of Mr. Russell's paper does not so directly concern me. But I should like to say one or two things about it.

First, I cannot see that his "determination of the nature of an object capable of being thought about" is a peculiar case. All objects that are determined at all from premisses are determined by thought making constructions out of data which it attaches to a single subject. It makes no difference to the process whether the data are real or supposed, perceptual or intellectual; only in the case of supposition the conclusion is more explicitly conditional, and the inference to reality may not be expressed in detail.

And secondly, of course (p. 454) the inference is *from* the "nature" of the generality though it *appeals to* the nature of the whole real world. We are dealing here—I do not know why Mr. Russell omits to mention it—with a simple disjunctive relation, and the dependence of this on the nature of the generality, *e.g.*, of the species of triangle on triangularity, is common form in the account of disjunction.[1]

Thirdly, a denial is always ambiguous, and on page 454 I am not sure whether Mr. Russell denies that making simple intuition the basis of thinking is the rock to be avoided, or that to found our inference from R on the nature of R is to make simple intuition the basis of thinking. But I am quite content with his foundation of our inference from R on the nature of R as a system, so long as its dependence on surviving reality for its aspect of affirmation is accepted. That any system from which inferences are to be drawn should escape confrontation with the total universe, is what I cannot understand.

Fourthly, it is the whole of reality itself, not any subject selected within it, on which in my view the truth of a judgment claims to rest. Consequently, the difference between a real individual if there were such a thing within reality, and a logical individual (455) or whole capable of being thought about, is irrelevant to the question of dependence on reality. All thought-determination is determination by judgment, and the presuppositions of all judgment are the same.

Fifthly, I may venture to remark that the merit of Prof. Stout's view of the reality of alternative possibilities under a generality has always seemed to me to lie in the conception of relative possibility, according to which the whole set of alternatives are possibilities only from the point of view of the selected generality as such; but as determination progresses, the horizon of possibilities narrows—so I understand the view—until the fully determined or sole pos-

[1] *E.g.*, in my *Logic*, i., 327.

sibility, the fulfilled alternative, coincides with the fully determined reality. It is the alternative which is accepted by *all* the data. The relatively possible, I take it (I am not sure that Prof. Stout would accept this) is only relatively real. The problem, I should say, cannot be reasonably approached except on the basis of degrees of reality.

Sixthly, I cannot reconcile the footnote on page 451 with the account of generalities on page 453. I certainly see no objection to saying that A has the predicate "*a* or *b*"; but it follows from the nature of a generality (p. 453) that if A is determined as having this predicate of two alternatives, it is also determined as characterised by the general quality, say, colour, of which they are specifications, I suppose that the point of the footnote, with the reference to Dr. Latta's article in MIND 89, is to maintain the self-containedness of a relational system, and the truth of whatever determinations its nature necessitates, in relative opposition (relative *at least*) to the idea of judgment as prima facie ascribing some quality to something real. I do not think anyone could attach more importance than I do to the idea of a self-determining system; but still it seems to me, as I indicated above, that if you neglect the aspect of judgment, your system drops dead, and fails to be determining at all. It is as united in one with reality that its parts come together and acquire reciprocal bearings. The judgment *is* as it seems to me, the system's aspiration to truth. And is not Dr. Latta's difficulty, which he has most suggestively expressed, a difficulty in the nature of thought itself?

DISTINCTION BETWEEN THE PHYSICAL AND THE PSYCHICAL.

There is a point in Mr. Turner's paper on my *Theory of Mental States* in MIND for July, 1918, page 317, which I should like to explain briefly. He quotes my sentence "The nature of external objects is continuous with that of the stuff of mind, and is physical, *i.e.*, has variations relative to those of other objects, as well as psychical". And he objects to this as a distinction, that psychical content as well as physical, has variations of degree in relation to variations of other objects as, *e.g.*, fear in relation to hearing a gun fired. I daresay my phrase was not felicitous. But I think the distinction intended is sound. It is the same which Husserl afterwards pointed out between an Erlebniss and a thing given to perception.[1] A thing is in principle given and in and through variations according to the percipient's standpoint. An experience (Erlebniss) is simply itself, an absolute as it is given. It has no "sides," no "aspects". Its qualities and intensity are given, as what they are. It has not the inadequacy, the suggestion of points of view ad *infinitum* and new aspects relative to them, which essentially belongs to a thing perceived. "It is evident that the nuancing

[1] *Jahrbuch*. 1913, pp. 77, 81 ff.

sensation-contents themselves, which belong in actuality (reell) to the experience (Erlebniss) of the thing-perception, function as conveying nuances (variations, Abschattungen) for the object, but are not themselves in their turn given through variations."[1] I may vary from one degree of fear to another; but my fear does not present itself to perception through variations according to distance and position. That is what I meant to say.

BERNARD BOSANQUET.

[1] *Loc. cit.*, 82.

LOGIC AND FORMALISM.

I AM sure we ought all to be very much obliged to Mr. Shelton for the way he is helping logic to set its house in order. The versatility he exhibits in his benevolent interventions in logical disputes almost equals that of the Snark when, in the trial of the Pig, he not only acted as counsel for the defence but also found the verdict and pronounced the sentence. At any rate he is quite catholic in his generosity, and extends his aid to any logician he sees to be in distress. Thus he is not deaf to Mr. Pickard-Cambridge's mute appeal; but when he beholds him "trapped into a slight ambiguity" and unable to cope with the objections of a logic he does not understand, he at once rushes to his assistance, performs a "slight emendation" upon him, and thereby saves him from eight pages of criticism, which *eo ipso* become so irrelevant that he need say no more, nor fall into any more 'traps' —if only he will keep still.[1] Though at first it seems to savour a little of 'sympathetic magic' to suggest that an operation performed *upon Mr. Pickard-Cambridge* will have the effect of invalidating *my* argument, it all seems morally admirable, and it might even be logically helpful if Mr. Shelton had only been good enough to state what he conceived to be the "slight ambiguity" it took me eight pages to clear up. For I, unfortunately, have been fearing all this time that I was contending with something much more formidable, *viz.*, a sort of Freudian 'complex,' in which a profound but unconscious Formalism, allied to an inveterate Intellectualism, was misconstruing the simplest deliverances of common-sense experience.

Again, inspired by Dr. Coffey, Mr. Shelton comes forward as the chivalrous champion of Scholastic logic, though without "pretending to be an authority on it" (p. 465) or "wishing to be understood to be arguing for it" (p. 466). He convicts me of 'ignorance,' because I did not at once surrender to the distinction between 'rational' or '*certain*' and 'empirical' or '*provisional*' knowledge (p. 465), nor recognise that by no criticism could I ever hope to do more than induce a Scholastic to degrade a bit of knowledge, when convicted of empiricism, from the first class to the second, while preserving his distinction intact. But is this really so? Would it remain true and 'valid' if the First Class had *no* members, and it could never be shown to have any, humanly speaking? If the world were empirically such that *no*

[1] No. 108, pp. 466-467.

'twos' and 'threes' ever behaved as they arithmetically should, nor ever combined to generate a progeny of 'fives,' would an arithmetic that had ceased to be *applicable* continue to be called '*true*'? And how is it an answer to the contentions, (1) that *if* a 'demonstration' conveys *no* assurance of the material correctness and actual occurrence of the conclusion it anticipates, it leaves us dependent for these on the empirical course of events, (2) that *if* every form is liable to become 'invalid' by becoming ambiguous in its application, none can be called 'absolutely valid,' (3) that *if* universals have to be selected from a number of alternatives, *whenever we try to argue from them*, we can never be sure that we *have* used the *right* ones for our purpose, until *after* the event and when the conclusion has 'come true,' (4) that therefore every 'demonstration' requires verification by fact? These are contentions to which the Scholastic logic is exposed, in common with the rest of the tradition, and so far it has not been possible to discover how either it, or Mr. Shelton speaking on its behalf, or Mr. Shelton speaking *in propria persona*, would cope with them. If they are admitted —and Mr. Shelton will no doubt tell us what he has advised the Scholastic logicians to do about them—wherein does the superiority of the 'rational' truth over the 'empirical' consist? The latter is no doubt provisional, and corrigible, and not absolute. But when it ventures on a prediction, we can be reasonably and practically certain that it will come true as alleged. The former is always at the mercy of any perverse ingenuity which chooses to misapply it, and will then lead us astray; while even in the best of cases we have always to wait and see whether its predictions will take effect. How then is its actual truth, when it is arrived at, more than empirical?

Finally it would be most ungrateful of me if I did not acknowledge Mr. Shelton's succour to me, his services as an expert commentator on my logical doctrines, and his powerful endorsement of my animadversions upon the present attitude of logicians. He finds "their philosophical basis so confused that I am bound to admit that Dr. Schiller's sweeping statement is not altogether unjust" (p. 469), and repudiates "the multitudinous confusion with which modern logicians have enveloped and disguised what to me are a number of very simple and obvious principles" (p. 464).

But I should be even more grateful than I am if I could make out from Mr. Shelton either (1) how he conceives "the meaning of formal validity" which seems to him so "clear and unequivocal," and (2) how he meets my objections to it. I find these problems particularly puzzling in connexion with his declaration (p. 467) that he, Mr. Pickard-Cambridge and I "are in entire agreement" on the contention that "no reasoning, no strictly logical argument, is in itself a guarantee of material or empirical truth". I welcome his assent to this principle, though I cannot altogether approve his annexation of it without conceding to Mr. Sidgwick's prior claims even the indemnity of a mention. But when he pro-

ceeds to infer that therefore "Logic becomes a purely conceptual science, like mathematics" (p. 469), I get qualms. I scent the cloven hoof of Formalism and resent the analogy with mathematics. Indeed, Mr. Shelton had himself observed this on page 468, and had embraced the scientist, the mathematician and me in a common condemnation on account of our conception of the relation of mathematical truth to its applications. Hence I am led to wonder whether he is speaking quite correctly for Mr. Pickard-Cambridge. Moreover he represents me (much more correctly) later as holding that "formal validity does not in fact exist".[1] It, then, logic is defined as a 'purely conceptual' science concerned with formal validity, does it not follow that it must be a science of the non-existent? And if so, why should it be valuable or admirable, especially if it is also admitted to be neither useful nor even usable? Surely the more natural inference from Mr. Shelton's 'axiom' is that as *material* truth is what we want to be assured of, and as formal validity will not secure it, we had better look out for something more effective and reconsider the whole problem of truth.

The 'metaphysical problem' on the other hand, put to me on page 469, I can understand. It seems indeed to be an excellent problem, on which a book might well be written; but I boggle at some of Mr. Shelton's illustrations. Thus I see no absurdity in saying "that the axiom of parallels and Riemann's space may both be true at the same time": surely, they both *are*, in the sense of 'truth' which matters most. The axiom of parallels is one way of stating the *differentia* of Euclid's space, and so is excluded from Riemann's: but, as Poincaré has so conclusively shown, *both* these conceptions are (or may be) *applicable* to our physical space, and in this sense 'true' (*qua* 'convenient'); whereas to the question whether our space *is* Euclidean or Riemannian the proper answer is *neither;* for to ask it is to exhibit a confusion of thought and a failure to distinguish between geometry and physics.

The main issue, as to the nature of logical 'coherence' and 'necessity,' however, could only be cleared up by an extended excursion into the psychology and postulates of knowing: so I will excuse myself with a pertinent analogy and ask Mr. Shelton whether, in his opinion, the rules of chess or bridge or lawn-tennis are absolutely true, metempirical and *a priori*, and productive of 'necessary truths'? If he asserts this, I will gladly concede that "the certainty of the *nexus*" in geometry is of the same nature: if he denies it, I will ask him to show in what relevant respect the cases differ.

[1] It is interesting to note that, in the same number of MIND, Mr. C. D. Broad has discovered that *inductive* reasoning cannot be regarded as formally valid, because it always involves either an illicit process of the minor or an affirmation of the consequent. If he would similarly go on to note that *deductive* reasoning is equally incapable of 'formal validity,' because it may always be charged with an ambiguous middle and cannot avoid a *petitio*, except by turning itself into a hypothesis and by submitting to the process of verification already rejected as 'invalid,' we should really be getting on!

I may conclude with a few comments on the appendix in which Mr. Shelton endeavours to solve the problem of logical form (pp. 470-471). His recipe is "First obtain some axiom or universal which can be regarded as absolutely true". This presumably is the logical parallel to the culinary direction "first catch your hare". But in its bearing on the discussion it labours under the disadvantage of begging the question. It is denied on the other side that such axioms can be obtained. 'Not even such as can be *regarded* as absolutely true?' Well, *anything* can be so regarded, if it is extralogical to raise the question of truth; but Mr. Shelton's example is not reassuring. He still quotes "things that are equal to the same thing are equal to one another," and thereby shows that he has not understood my illustration in No. 104, page 460. Or can it be that he is not cognisant of the psychological experiments on which it rests? At any rate I can only remark that though the principle may be called "undoubtedly valid"[1] it certainly is not absolutely true: it breaks down when it is applied to sense-perceptions. And we soon find that when it has done so Mr. Shelton is ready to deprive it of its title to validity. "The validity depends entirely on the assertion that the universal from which the form is derived is *absolutely true*." No, surely, on the *truth* of this bold assertion. I can agree, however, that "if the universal is not universally true the form is not absolutely valid, which is equivalent to saying it is invalid": but *I* should infer that therefore the universals known to science and in common use are *not* 'valid,' and that the hunt for a 'valid' one is a wild-goose chase.

F. C. S. SCHILLER.

[1] Though not, of course, in the sense of 'formally valid'. For Mr. Shelton's formulation, A = B, C = B, ∴ A = C, is obviously in the second figure and has an 'undistributed middle' in '= B'.

V.—CRITICAL NOTICES.

A Commentary to Kant's 'Critique of Pure Reason'. By Norman Kemp Smith, D.Phil., McCosh Professor of Philosophy, Princeton University. London: Macmillan & Co., 1918. Pp. lxii, 615.

Prof. Norman Smith dedicates this volume to the memory of Robert Adamson. And perhaps no higher commendation could be bestowed upon it than to say that it is a worthy tribute to offer to that memory. For Adamson was probably the greatest Kantian scholar which this country has ever produced; certainly his grasp of the multitudinous ramifications of Kant's speculation was unsurpassed, if not unique. Prof. Norman Smith's painstaking and searching *Commentary* combines qualities which Adamson would have been among the first to appreciate—wide and accurate learning, acute and pointed analysis of the various trends of inquiry in the *Critique*, maturity of philosophical insight in handling the intricate problems which call to be dealt with. The work is that of a genuine thinker who has spared no pains to make it adequate; and, although it takes the form of a commentary, it never sinks into the trivialities and ineptitudes that usually characterise Commentaries on philosophical classics. It is not, of course, and was not intended to be, a book to put into the hands of a beginner; but it provides for the advanced student most of the apparatus he will need in wrestling with the notorious difficulties of the *Critique*.

Naturally the author has availed himself largely of Vaihinger's massive *Commentar*, so far as it extends—*i.e.* to the end of the *Aesthetic*—and of Vaihinger's monographs on later sections. Sometimes, I am inclined to think, the influence of Vaihinger has been allowed to weigh beyond its due, but it never occasions acceptance of a conclusion that has not been carefully considered. The results of the devoted labours of such German scholars as Benno Erdmann, Adickes, and Reicke have been called into requisition, although one misses the names of men like Günther Thiele and Franz Staudinger to whom in one's own efforts to penetrate to the mind of Kant one is conscious of owing perhaps more than to those just mentioned. In tracing the development of Kantian doctrine, Prof. Norman Smith draws extensively on the *Reflexionen* and the *Lose Blätter*, and here again it is a question whether he is not at times tempted to attach too much importance to the evidence they appear to yield. But he uses this material in a perfectly judicious manner, and no one

will dispute the propriety of taking it into account in determining doubtful points of exegesis. With Cohen, Green, and Caird, in so far as they treat the Kantian system as a half-way stage to the Hegelian philosophy, he finds himself in frequent disagreement, but acknowledges nevertheless, as indeed every Kantian student must acknowledge, his great indebtedness to them.

The Commentary is preceded by a long and valuable Introduction, dealing in succession with Kant's method of composing the *Critique*, his relation to Hume and Leibniz, and the main general features of his philosophical teaching. There is also a very helpful Appendix in which the question of Kant's relations to his predecessors is discussed in more detail.

That the text of the *Critique* makes no small demands upon the skill whether of translator or expositor needs no emphasis. Not only is it wanting in clearness and freedom of style, but there is a continuous tendency on Kant's part to repeat, with certain modifications, some previously enforced contention. A thought is introduced, dropped, then taken up again; numerous side-issues are allowed to intrude, while the main theme is held in abeyance. Often there is confusing prolixity just where the importance of the subject calls for definite and unambiguous statement. And not seldom there are actual discrepancies and contradictions, showing that Kant was gradually feeling his way towards many of his central positions. The *Critique* is clearly not a unitary work; and, in common with Vaihinger, Adickes, and others, Prof. Norman Smith adopts the view that in the five months of the latter half of the year 1780, in which it was "brought to completion," it was not actually written, but was more or less mechanically constructed by the piecing together of older manuscripts, composed at various dates during the period 1772-1780, although, no doubt, supplemented by the insertion of connecting links and altered here and there in order to suit the new context. That this view is substantially correct may, I imagine, be taken as established. But it is a view particularly liable to be worked to death, and I confess to feeling serious misgiving when, for example, the attempt is made to break up the central portion of the *Analytic* into at least four distinct layers, somewhat after the manner in which the *Hexateuch* has been split up by recent critics. The information furnished by the posthumous fragments seems to me quite insufficient to warrant a procedure of that kind. And, after all, it has to be remembered that some of Kant's utterances which are most difficult to reconcile with his mature theory belong undoubtedly to his later years.

It has ordinarily been supposed that Kant was dependent for his knowledge of Hume's discussion of causality upon the translation of the *Inquiry* which appeared in 1755. Prof. Norman Smith, however, thinks the awakening from "dogmatic slumber" took place through his becoming acquainted with the argument of the *Treatise* as it was crudely presented, along with quotations from it, in Beattie's *Essay, on the Nature and Immutability of Truth*, a

German translation of which was published in 1772. This is probable enough; but it is scarcely likely that, entertaining the opinion he did of Beattie's capacities, Kant should have trusted that version of Hume's doctrine and not have been led to a re-reading of the *Inquiry*. In any case, he can hardly have known the *Treatise* itself. The fact that he takes Hume's sceptical criticism to be limited to causality and his failure to notice Hume's empirical theory of mathematical truths would seem in that respect to be conclusive. Prof. Norman Smith's account of the influence of Leibniz upon Kant's philosophical development is extremely well done, and brings out with clearness and force the essential considerations. "The real is (for Leibniz) only one of the many kingdoms which thought discovers for itself in the universe of truth." Truth is, therefore, wider than, and logically prior to, existent reality, and, instead of being dependent upon the latter, legislates for it. Leibniz starts, accordingly, from the possible, as disclosed by pure thought, in order to ascertain in an *a priori* manner the nature of existent fact. And it was Kant's aim to determine how much of Leibniz's doctrine of the legislative power of pure reason can be retained after full justice has been done to Hume's proof of the synthetic character of the causal principle.

The statement of the more general features of the Critical theory which is contained in the Introduction must, as the author says, stand or fall by the results obtained through the detailed examination of the *Critique* itself, and may be here considered in conjunction with what is offered in the body of the *Commentary*. Prof. Norman Smith has been led to a somewhat startling interpretation of the genuinely Critical and mature teaching of Kant, wholly unlike that with which the Hegelian expositors have familiarised us, and sharply contrasted too with the subjectivist tendency that admittedly in the pages of the *Critique* pursues its course alongside of it.

About the subjectivism little need be said. There can be no reasonable doubt that Kant frequently tends to expound the general theorem that whatsoever can be asserted to constitute part of the world of experience must be construed in terms of intelligence as though it signified that the experience of the conscious subject consists exclusively of *Vorstellungen*, states of mind. There clings undoubtedly to a great deal of his argumentation the view that the object known must be a *construction* on the part of the finite mind, a *product* of that mind's own making, and must as such lie within the limits of the mental life in question. "If, as Kant so frequently maintains, objects are representations and exist only 'within us,' their existence 'outside us' must be denied" (p. 151). We get, in fact, a position hardly distinguishable from Berkeley's idealism which Kant was certainly anxious to repudiate.

That subjectivism is, nevertheless, not the final outcome of Kant's investigation of knowledge may be taken to be the conviction of all competent students of the *Critique*, however much they may differ as to the exact bearing and significance of what, in contrast

therewith, may be described as *the* Critical theory. To attempt to disentangle and put together the essential threads of Kant's more mature reflexion is a somewhat thankless task, for it is sure to be met with the taunt that it once more confirms the opinion of those who regard the *Critique* as a book "in quo quaerit sua dogmata quisque". Prof. Norman Smith has not been, however, on that account, deterred, but seeks to exhibit, even by the help of a diagram, what he conceives to have been Kant's new and revolutionary standpoint,—a standpoint which, as it is based upon the distinction between appearance and reality, he proposes to call that of phenomenalism. If I correctly understand his rendering of it, this phenomenalistic theory is briefly as follows. Fundamental to the whole way of thinking is, he contends, the antithesis between the empirical and the pure or transcendental ego. The latter is the counterpart of a single cosmical time and of a single cosmical space within which all events fall. Its objects are not mental states peculiar to itself, but genuinely independent existents constituting one common world. The conception necessitates a radical revision of Kant's earlier mode of regarding both the *a priori* and the *a posteriori* elements of experience. In the first place, the transcendental ego, although it is the "bearer of appearances," the "coequal" and correlate of the world of phenomena, is not forthwith to be assumed to be in itself ultimate or noumenal in character. On the contrary, it may be a resultant, resting upon and due to a complexity of generative conditions; and, in that case, these conditions could not themselves be known to be conscious. We are not, therefore, entitled to contemplate the synthetic processes that render experience possible as the activities of a noumenal self. For the only self we know is the conscious self, and the synthetic processes must take place and complete themselves prior to the existence of any consciousness at all. Moreover, granting that self-consciousness is the form of all consciousness, yet it is no less true that self-consciousness is only possible in and through the consciousness of objects. Consequently, there is no reason for supposing self-consciousness to be any more primordial or ultimate than consciousness of objects. Consciousness of self and consciousness of objects mutually imply and condition each other. In the second place, the manifold upon which the synthetic processes act cannot, from this point of view, be identical with the sensations of the special senses. Rather must the "primary manifold" be thought of as due to the affection by things-in-themselves of those factors in the noumenal conditions of the self which correspond to "sensibility". The spatial world within which objects are apprehended as causally interacting, and as giving rise through their action upon the sense-organs to the various special sensations as temporal events is generated through the synthesis of this primary manifold in accordance with the forms of space, time, and the categories. Sensations, therefore, are phenomenal effects arising from phenomenal causes; and to explain the phenomenal world as

constructed out of them would be virtually to equate that world with a small selection of its constituent contents. What, then, Kant is in truth now doing is to substitute the distinction between appearance and reality for the Cartesian dualism of the mental and the material. The psychical, or the subjective, is, as he views it, a name for a certain class of known objects, *i.e.*, of appearances, which, so far from constituting our consciousness of nature, are themselves part of the natural order which consciousness reveals. The physical is a name for another class of known objects, known no less immediately than sensations or other psychical objects. Together these two form a single system. But underlying this entire system, conditioning both series of phenomena, is the realm of noumenal reality; and it is to the latter we are referred when the question is raised as to the possibility of knowing or experiencing the natural system. Everything experienced, even a sensation or desire, is a natural event; but the awareness of it is not a natural event, and demands an explanation of an altogether different kind.

To discuss with any approach to adequacy the question as to how far the doctrine which I have, I hope without doing injustice to it, thus rapidly sketched does, in fact, correspond to Kant's final standpoint, so far as one can determine it, would mean entering into minutiæ which the limits of a review preclude. I think many lines of reflexion in those portions of the *Critique* to which our author refers do seem to adumbrate a position not unlike that which he delineates,—a position, I take it, which might otherwise be summarily expressed by saying that the empirical world as a whole, together with its counterpart, the unity of apperception, may be conceived as a noumenon in a system that may include countless other noumenal realities. But I doubt very much whether Kant ever reached the stage of thus definitely representing it to himself. And certain features in Prof. Norman Smith's version of the theory strike me as decidedly un-Kantian. In particular, I can find no indication in any of Kant's utterances that he conceived "the synthetic processes" to be "of a noumenal character". It is quite true that, while proceeding on the simple maxim that unity of consciousness is possible only in and through cognition of objective fact, Kant never succeeds in showing that the notions involved in such cognition of objective fact are in intimate relation to unity of consciousness, just because he persists in considering unity of consciousness in abstraction,—as dissevered, that is to say, from the complex whole of which it is a necessary factor. Yet it is abundantly clear that unity of self-consciousness as the condition of possible experience, the determination of intuitions according to the categories, and the reference of intuitions to objects are for him but three ways of naming the same thing. It is true, again, that unity of apperception cannot be regarded as "the source of the synthetic processes," if unity of apperception is to be taken only "in so far as it finds expression in self-consciousness" (p. 279); because, then, as Kant will have it, "ich, als denkend, bin ein Gegenstand

des innern Sinnes" (B. 400). But the 'pure consciousness' which is involved in the awareness of objects, whether outer or inner, is, we are expressly told, neither a notion nor an intuition; and it is only indirectly,—from its results, so to speak,—that it becomes possible even to speak of it as a process. It "resembles a substance which remains when all the accidents are withdrawn" (*Fortschritte*, H. viii, p. 531). And argument after argument of the *Deduction*, in the second no less than in the first edition of the *Critique*, would become unintelligible, if we were to suppose Kant was not meaning to imply that the various types of connexion in experience are the ways in which unity of apperception manifests itself in relation to the given manifold. For one thing, no point is by him more insisted upon than that conjunction or synthesis is never "given". If, however, the "synthetic processes" are "non-conscious activities" due to "noumenal conditions which fall outside the realm of possible definition" (p. 277), they would be no less "given" than "the product of noumenal agencies acting upon sensibility".

No one, I suppose, has ever felt satisfied with the account Kant has to offer of the "empirical ego". He emphatically describes it as only an object, and yet it is very evident that, even on his own showing, it is quite impossible so to regard it. Moreover, he is at once confronted with insuperable obstacles when he attempts to make the perception of the "empirical ego" as object conform to the general principles of his theory of knowledge. Prof. Norman Smith thinks (p. 311) that in maintaining the categories can *acquire* significance only in reference to outer perception Kant did not intend to limit their application to the mechanical world of physical science. Probably not; but the point is that, intentionally or otherwise, such is the consequence following from his contentions in regard to the inner life. Our author has himself to admit the perplexity that ensues from the permanent which represents time being identified with matter. He lays stress, however, upon the great importance and significance of the doctrine of inner sense in Kant's teaching, and apparently regards it as contributing in no small measure to the transformation which, as he conceives, the Critical theory underwent. But from his interpretation of the doctrine of inner sense its thoroughly unsatisfactory character seems to stand out more prominently than ever. "The subjective," he writes, "is not to be regarded as opposite in nature to the objective, but as a subspecies within it. It does not proceed parallel with the sequence of natural existences, but is itself part of the natural system which consciousness reveals. Sensations, in the form in which they are consciously apprehended by us, do not constitute our knowledge of nature, but are themselves events which are possible only under the conditions which the natural world itself supplies" (pp. 313-314). Yet we are told further on (p. 321) that, although inner *Vorstellungen* do not produce or generate spatial objects nor even condition their existence, they

are required for the individual's empirical consciousness of them. How, then, are these two assertions to be reconciled? Is it meant that *Vorstellungen* exist before there is any consciousness of them as objects, and that it is only when, through them, we are aware of their objects we can be aware of these *Vorstellungen* themselves as objects? In that case, however, the contention that they are merely a "subspecies of the objective" breaks down, for clearly their essential character is just that which the subsequent apprehension of them as objects fails to reveal. And not only so. The subjectivism of the fourth *Paralogism* of the first edition is not thus by any means surmounted, for if the empirical consciousness of spatial objects is mediated through *Vorstellungen*, the mere fact that the *Vorstellungen* may themselves come to be apprehended as objects would in no way preclude a Berkeleian from maintaining that the spatial objects "are something only through these *Vorstellungen*". If, on the other hand, it be meant that *Vorstellungen* exist only in so far as they are apprehended as objects, and that spatial objects are apprehended just as directly, or indeed that the former apprehension is possible only in and through the latter (p. 313), then not only is it difficult to see how these *Vorstellungen* can be said to form part of a mental life, but to speak of them as having external things for their objects would be to assert what is wellnigh unintelligible. For the subject-object relation surely implies that one term of the relation, at any rate, is more than an object. In spite, therefore, of Prof. Norman Smith's attempt to bring coherence into the doctrine of an inner sense, I feel constrained to acquiesce still in Adamson's judgment that it constitutes an altogether imperfect portion of Kant's analysis, and that its very imperfections show there must be some fundamental error at the root of the analysis.

Equally unsatisfactory is the position assigned by Kant to the 'transcendental ego'. According to Prof. Norman Smith's rendering of the genuinely Critical theory, some kind of existence must evidently be ascribed to the transcendental ego, although what kind is left entirely indeterminate. Admittedly it is neither noumenal nor phenomenal existence (p. 323 *sqq.*). Adamson more than once expressed his strong belief that "in the term 'pure ego' we have no more than Kant's peculiar and unhappy way of naming the fundamental characteristic of experience, that it is expressible only in terms of consciousness"; or, in other words, Kant's ambiguous mode of indicating the common feature of all parts of experience, that they are, as we say, 'in consciousness,' facts for mind. And the use, in this context, of the term 'transcendental' would seem, in itself, to support that view. The term, as Prof. Norman Smith points out (p. 73 *sqq.*), is primarily employed by Kant as a name for a certain kind of knowledge,—that kind of knowledge, namely, which takes into account the character of a notion or principle as a condition of experience, and as therefore a source of *a priori* cognition. A transcendental theory of space, for example, is a

treatment of space as a form of intuition and a source of *a priori* knowledge. There is no "transcendental sense-perception" (a phrase which Max Müller by a mis-translation ascribes to Kant) nor is there a transcendental space. Similarly, a transcendental theory of self-consciousness should be a treatment of self-consciousness as involved in all experience of a thinking being, as the form or norm of consciousness in general. There would be no distinctive type of consciousness different from the 'empirical' and possessing a mode of existence called 'transcendental,' but in virtue of what is implied in the supreme condition of experience,—that it has meaning, namely, only in self-consciousness,—there would follow the general determinations holding good for all experience, and constituting, therefore, a source of *a priori* knowledge. That Kant frequently tends in the direction of giving a quasi-substantive kind of existence to the 'pure ego' must be admitted. But the question is whether this tendency is not due to considerations such as those which frequently lead him to institute an antithesis between the form and matter of experience so sharp that it would, if interpreted literally, break the back of the theory of their essential correlation which he is beyond all else concerned to maintain.

I think an interpretation corresponding to that just indicated of the 'transcendental ego' fits another of Kant's characteristic conceptions, and that in its respect also the arguments of the present *Commentary* are unconvincing. In a very interesting and detailed discussion (pp. 204-219), Prof. Norman Smith attempts to show, what he finds has not hitherto been detected, that the doctrine of the 'transcendental object' is a pre-Critical or semi-Critical survival which is essentially out of harmony with Kant's more mature teaching. In all the passages in which the phrase 'transcendental object' occurs he takes the term 'transcendental' to be employed in the sense of 'transcendent' and supposes that what is meant is invariably the unknown thing-in-itself. To me, on the contrary, it seems clear that in the more important sections at any rate in which the notion in question is developed it is not identified with the notion of the thing-in-itself but rather contrasted with it. I think this is so, for example, in the section on *The Synthesis of Recognition in Concepts* (A. 104-110), where the pure concept of the 'transcendental object' is declared to be that which can alone confer upon all our empirical concepts relation in general to an object, or objective reality. The gist of the argument is that an object is that in the notion of which a given manifold is combined; the notion of an object is that which steadies the wandering manifold of possible intuition and prevents the contents of knowledge appearing haphazard and at random; an object is, in fact, the unity of rule which determines every manifold and limits it to conditions which render unity of apperception possible. If, now, Kant proceeds to state, this element of objectivity be taken in abstraction, if it be divorced from the act of perceiving or judging in which alone it has reality, it may be called 'the transcendental

object' (which in all our knowledge is always the same = x). The 'transcendental object,' that is to say, is no more than a thought, and we have no ground for regarding the content of that thought as an existing thing with any properties at all, much less as a thing giving rise to presentations which enter into experience. The decisive passage is, however, that contained in the chapter of the first edition on *Phenomena and Noumena* (A. 250-251). In the paragraph preceding those which are here in question, Kant has been pointing out that the very notion of 'appearances' might be supposed itself to involve the objective reality of noumena and to justify the assumption of a two-fold world—a *mundus sensibilis* and a *mundus intelligibilis* (such as he had himself adopted in the *Dissertation*), in which case the something that appears would be a thing-in-itself and an object of a non-sensuous intuition. But, he goes on, while it is true that our *Vorstellungen* are, in point of fact, referred by the understanding to some object, to a something as the object of sensuous intuition, yet this something is in truth no more than the 'transcendental object,' an x which merely has the function of standing as a correlate of the unity of apperception to the unity of the manifold, by means of which the understanding combines the manifold into the notion of an object. "This transcendental object can in no way be separated from the sensuous data, for on removal of these nothing would remain whereby it might be thought." And further on (A. 253), he affirms explicity that the 'transcendental object,' the 'wholly indeterminate thought of something in general,' cannot be called the *noumenon*, seeing there can be no notion of it except as the object of a sensuous intuition in general, and thus as one and the same for all appearances. Now, Prof. Norman Smith holds that what Kant is here "really asserting" is that "the correlate of the unity of apperception is the thought of the thing-in-itself" (p. 214), whereas as I read the text what he is asserting is the exact opposite. The 'transcendental object' he seems to me to be contemplating as an element in the fundamental act of knowing, the act whereby there is brought forward in the life of consciousness the antithesis between subject knowing and object known, the subject knowing not as yet being regarded as the concrete individual. In other words, the antithesis is conceived as merely the form of knowledge in general. The 'transcendental object,' the pure form of objectivity, introduces into sensuous apprehension the characteristic of objectivity; and accordingly when, in other places, it is said to 'affect our sense,' this need only mean, not that it works causally, as a transcendent thing, upon sensibility,[1] but that it *determines* sense-data through transcendental conditions. For throughout the argument Kant means by 'object' the general law or rule determining the mode of connexion of the given material, and the whole point of his contention is that apart from thought there can be no

[1] *Cf.* A. 253 = B. 309. "The mere fact that there is within me an affection of my sensibility establishes in no way any relation of such a presentation to any object."

objectivity. So that, in truth, the 'transcendental object' fulfils the same function as the transcendental unity of apperception. The difference consists simply in this, that the latter represents only the function of pure thought in its ultimate unity, while the former represents a problematical result, so to speak, of such pure function, an unrealisable but yet problematically definable task of constructing the pure object apart from all foreign ingredients. The thought of a thing-in-itself would not be the thought of 'something in general' but the thought of a definite specific 'something,' such as could be the object of a non-senuous intuition. If the perfect generality of the 'transcendental object' be ignored, if it be assumed to have a mode of existence which can be characterised by features other than those of experience, then, no doubt, Kant would say it is treated as a thing-in-itself. It is, however, as I understand it, part of his main purpose to insist upon the illegitimacy of the tendency, natural though it may be, to represent the 'transcendental object' as having a nature, a mode of existence of its own, and thus to transform a mere element of experience into a self-existent thing. In view of the explicit declaration that the 'transcendental object' cannot be called the 'noumenon' (A. 253), Prof. Norman Smith is obliged to suppose that the latter term is here employed by Kant in a different sense from the term 'thing-in-itself' (he takes it to be the thing-in-itself "more specifically determined"). For that supposition I can find simply no justification. "It is always safer," so we are told at the beginning of the book, "to take Kant quite literally. He nearly always means exactly what he says at the time when he says it" (p. 89). I am far from feeling inclined to subscribe unreservedly to this rather imperious dictum, but I am at a loss to see how any unprejudiced reader of the chapter of the *Critique* under discussion can imagine for a moment that the terms in question are not used quite indifferently, especially as in two places at least they would seem to be expressly identified (A. 254 = B. 310 and A. 259 = B. 315). That the passages referring to the 'transcendental object' are survivals of the pre-Critical period is, in any case, an exceedingly difficult position to sustain. As I read then, there is no need for resorting to so desperate an expedient. On the contrary, in the two sections I have cited, Kant appears to be wrestling with a problem from which, the Critical point of view, was forced upon him.

I must be content merely to call attention to another portion of our author's exposition wherein his account of Kantian doctrine deviates widely from that of most other expositors, and where, I cannot help thinking, the dictum just quoted has turned out to be a treacherous guide. He is of opinion that in the *Aesthetic* Kant is almost exclusively concerned with proving the apprehension of space (and time) to be psychologically *a priori*, and he finds there two contradictory views of the psychological nature of space intuition. According to the one, space lies ready (*liegt bereit*) in the mind, and exists, prior to experience, as an actual, completed, con-

scious intuition, which remains when all sense-content is thought away. It is not a mere form but possesses, independently of the sensuous manifold, a pure manifold of its own. According to the other, space intuition precedes experience only as a potential disposition which, by reflexion upon the activity of the mind, may be seen to yield a pure manifold distinct from the manifold of sense. In respect to this interpretation, I will only urge two considerations (1) It is clearly possible to attach an altogether exaggerated importance to such phraseology as 'liegt bereit,' etc. Certainly, so far as the doctrine of the subjectivity of space is made to turn in the *Aesthetic* upon psychological grounds it is more than doubtful. But, after all, Kant is not dealing even there with the psychology of space-presentation; the whole problem as to the psychical factors involved in localisation is, for example, never so much as alluded to. (2) When a writer, looking back upon what he has written, goes to the trouble of guarding himself against a certain interpretation of which he sees it to be susceptible, it surely savours somewhat of perversity to insist that nevertheless he could have meant, at the actual time of writing it, nothing else. I have, namely, in mind, the well-known footnote of the second edition (B. 160-161) in which Kant affirms in the most unmistakable of terms that he did *not* intend in the *Aesthetic* to imply that space was an original presentation, given prior to the synthesis which all experience involves, but that the form of intuition was the condition of the *possibility* of space-apprehension while combination of the manifold according to the categories was necessary to render it *actual*. Prof. Norman Smith further contends that nowhere in the *Critique* is space regarded by Kant as a form of the sensuous manifold. Although in the *Analytic* space intuition is recognised to be acquired by reflexion upon *objects*, yet the difficult position is still maintained that such reflexion yields a pure manifold distinct from the manifold of sense (p. 93). It is admitted, however, that there is no one passage which can be cited as quite decisively proving Kant's belief in a pure manifold of intuition (p. 93 *n.*), and also that in what the pure manifold consists or as to how it is to be reconciled with continuity there is no attempt on Kant's part to explain (p. 97). To me, I confess, these admissions appear in themselves sufficient to make us pause in attributing to Kant so crude a view; and, so far as I can judge, the statements to which appeal is made in support of the contention are all of them compatible with the less violent hypothesis that, in speaking of a manifold that is given *a priori*, Kant is but referring to features in the sensuous content which on account of their generality and constancy must be, as he holds, contributions from mind to experience, and which may be *thought of* in abstraction from the variability of the empirically given material.

By dwelling chiefly on the more disputable parts of the *Commentary*—and any independent study of the *Critique* will have inevitably its disputable parts—I have left myself little space for touching

upon the far larger range of topics in regard to which I am in full accord with the author's exegesis. Unless the *Commentary* had been expanded to unwieldy proportions, the *Dialectic* had necessarily to be passed through more rapidly than either the *Analytic* or *Aesthetic*; but there have been singled out for treatment the essential and fundamental things. In particular, I welcome the emphasis laid upon the positive side of Kant's teaching in respect to Reason and its Ideas. For, alongside of the negative line of argument directed to exposing the delusive tendency of construing the demands of Reason after the fashion imposed by the categories of the Understanding as solved by means of objects, there runs through the whole of the *Dialectic* the complementary trend of inquiry that aims to show what of real significance and worth is contained in the intellectual effort after unconditional completeness of comprehension. Kant never wavers in regard to the supreme importance of Reason, never hesitates to insist that, while the field of experience may bring before us problems which are in truth insoluble, the problems of Reason, which are not thrust upon it from without, must have a solution in terms of Reason. "The Idea of the unconditioned," as our author puts it, "is (according to Kant) distinct in nature from all other concepts, and cannot be derived from them. . . . As it is involved in all consciousness, it conditions all other concepts; and cannot, therefore, be defined in terms of them. Its significance must not be looked for save in that Ideal, to which no experience, and no concept other than itself, can ever be adequate. That in this Ideal form it has a very real and genuine meaning is proved by our capacity to distinguish between appearance and reality. For upon it this distinction, in ultimate analysis, is found to rest. Consciousness of limitation presupposes a consciousness of what is beyond the limit; consciousness of the unconditioned is prior to, and renders possible, our consciousness of the contingently given. The Idea of the unconditioned must, therefore, be counted as being, like the categories, though in a somewhat different manner, a condition of the possibility of experience. With it our standards both of truth and of reality are inextricably bound up" (p. 430). And again: "Reason determined by principles which issue from its own inherent nature, prescribes what the actual ought to be; understanding, proceeding from rules which express the conditions of possible experience, can yield knowledge only of what is found to exist in the course of sense-experience" (p. 443). Prof. Norman Smith considers that most of the sections on the cosmological Ideas must be dated as amongst the earliest parts of the *Critique*, and that their teaching is correspondingly immature. He gives good reasons for thinking that originally Kant intended to bring his whole criticism of the metaphysical sciences within the scope of his doctrine of antimony. And he tries to show that Kant's proofs both of the theses and of the antitheses of the antinomies are in all cases inconclusive. For instance, in regard to the third antinomy, he rightly points out that while it is comparatively easy

to reconcile the universality of the causal principle with the unconditionedness of the transcendental ground upon which nature *as a whole* is made to rest, it is a very different matter to reconcile the spontaneous origination of *particular* causal series, or the freedom of *particular* existences, such as human beings, with the singleness and uniformity of a natural system in which every part is determined by every other (p. 517). Once more, the statement of Kant's position in regard to the teleological argument (pp. 538-540) is an admirably lucid piece of exposition. Finally, in the concluding pages, the links of connexion between the *Dialectic* and the two later *Critiques* are clearly indicated, although, perhaps, here more might have been made of the notion that seems to come into prominence at the end of the *Dialectic*,—the notion, namely, of the *adaptation* of empirical fact to human reason or intelligence.

A notice like the present can convey but a very imperfect idea of a volume so elaborate and circumspect as that before us. Prof. Norman Smith is to be congratulated on the successful termination of a work which must have involved enormous toil and for the undertaking of which no ordinary amount of courage was requisite. He has made no idol of the great classic upon which he has so patiently laboured ; he has exposed to view its inner want of consistency and its lack of completeness no less than its profound analysis and far-reaching suggestiveness. But he has made it once more evident that in the hands of Kant the problems of philosophy assumed a new form, and that there can now be no return to the pre-critical methods of inquiry. The translation of the *Critique* which Prof. Norman Smith has in preparation will be eagerly awaited and will certainly meet a real need. Meanwhile, the excellent renderings of many of the most important passages given in the *Commentary* will be extremely helpful. A word of recognition is due to the publishers and printers for the conscientious care with which the book has been produced from the press.

G. DAWES HICKS.

Elements of Constructive Philosophy. By J. S. MACKENZIE, Litt.D., LL.D. London : George Allen & Unwin. Pp. 487. 12s. 6d.

DR. MACKENZIE'S treatise, which, as he tells us in the Preface, has been before his mind for quarter of a century, covers, in a methodical argument, the whole main problem of philosophy. He has asked himself in good set terms whether an intelligible explanation of the universe can be found, and if so, in what direction it is to be looked for. Beginning, then, from Descartes, with the implications of mere belief, he proceeds to examine the presuppositions of judgment and inference — presuppositions which are summed up in the system of objective orders. Developing in a second book this conception of orders or categories, he discusses them in a succession

to the principle of which we are not unaccustomed, from quality at the beginning to the universality of the self at the end. And from this transition he passes in Book III. to confront directly his problem of the ground for accepting the conception of a Cosmos, and the ideas by help of which it may be made intelligible.

His work is full, lucid, and readable, and of all the very numerous points of opinion to which he refers, he leaves none untouched by free and suggestive criticism. Not unfrequently it will occur to the reader to ask whether his suggestiveness is fully controlled by a sound and relevant interpretation of the idea which he discusses. But a readiness to differ from everybody, even by approaching them from a standpoint which is not precisely their own, is too valuable in philosophy to be unwelcome. It leaves us, however, with such immense material for discussion on our hands—we feel, for instance, that we should like to be reinterpreting Kant's "Copernican" simile,[1] and Mr. Russell's self-representative series against Dr. Mackenzie, though in both cases on the whole we are with him—it leaves us with so much on our hands that the only thing to do seems to be to select a typical argument, which is also the central argument of the treatise, and see what attitude and what substantive conclusion it indicates on the writer's part.

Let us start from the treatment of the Laws of Thought (pp. 81 ff.). The Laws of Thought are the objective "conditions of intelligible meaning and valid inference," "yet they are not to be interpreted as conditions of reality," and when Mr. Russell said (as Mr. Joseph has also said), that they are Laws of Things, he was not expressing exactly what he meant (p. 81, note 1). And if, like Plato and Hegel, you maintain the rationality of the actual by showing the contradictions involved in not grasping reality as a whole, it follows from your view that "self-consistency can only be established as an ultimate result of thought about reality, not assumed as a fundamental presupposition" (82). "Fundamental laws of thought must, therefore, not be based on the nature of reality."

The consequence here propounded takes one's breath away, and is a case in which Dr. Mackenzie, so far as I can see, calmly and audaciously traverses the views of all modern students, at any rate, who pursue the method of which he is speaking. He has, of course, a point in what he says. It is that such a method admits

[1] See p. 156. The recent criticism of this simile, which Dr. Mackenzie adopts, seems to me to be verbal, ignoring the whole burden of Kant's argument. What he is insisting on is the need for the hypothetical deductive method; and he is urging that if you presuppose an observation point outside your hypothetical construction, you *ipso facto* debar yourself from completely theorising the data, and consequently treat them so far as things in themselves, *i.e.*, as something presented from a standpoint which you do not allow to be questioned. For a true scientific treatment, standpoint and data must all equally be elements in the hypothetical construction.

the contradictoriness of partial aspects within reality. Such an explanation as would be found, for instance, in Dr. McTaggart's discussion, of the connexion between this fact and the truth of the Law of Non-Contradiction does not seem to satisfy him. And, while thus digressing in criticism, I may suggest another point.

The forms of Objective Order, and the relations between Orders, are set forth in a special chapter. All implication depends on inclusion within some order (113). All inference rests on implication; so that "the general basis of all inference is the recognition of some form of Objective Order" (94). Now "what we mean by reality is the objective order" (62). Must not, then, the Laws of Thought after all express the nature of reality, and only so be the basis of inference?

However, this is not the view on which, if I understand him right, Dr. Mackenzie's argument is planned. He has taken on himself the tremendous burden of proving "the supposition that the universe is a perfect Cosmos" (125). This is for him, owing to his critical attitude described above, of the nature of a hypothesis, which must not be assumed at the beginning of an enquiry, but may conceivably be established in the end by the exclusive coincidence of its consequences with the data. Thus what he is on the look-out for is an ultimate explanation, something which will make the cosmos intelligible, a complete theory, an interpretation, a view of things as a self-explanatory system (347, 429).

What exactly explanation means is always a critical point in philosophy. The meaning which seems to me to be suggested by the course of the argument before us is that of a theory *ab extra*, a theory, so to speak, dealing with the conditions of universes as a class, and furnishing a plausible account of the distinctions, such as fundamental wholes and derivative sub-systems, chosen universes within the cosmos, and cycles of the upward and downward path within some inclusive spirit, by help of which the antitheses which seem to attend upon every real world may be plausibly rendered conceivable.

Now in a limited inductive inquiry you can really do something like this. Having before you an exhaustible range of data, you can exhibit a hypothesis whose consequences coincide with them, and you may by good fortune approach nearly to establishing it as the only hypothesis whose results do so coincide. Then you may plausibly say that the data are intelligibly explained by the hypothesis which thus is verified. Even so, it appears to me, a fundamental step is lacking to the argument. The true operative lever in induction is just that initial certainty that reality is self-consistent which our author has renounced. It alone gives the insight that there must be an explanation, and that therefore, where only one is possible, that one is true. It alone enables us to interrogate the data; not to seek a coincidence, but to analyse by help of a clue.

When we come to dealing with the cosmos as a whole, the

difference between the two initial attitudes reveals itself as of first rate importance. It is hopeless here to establish a theory such as will exhibit the experienced data deductively as its consequences, to propound an "explanation" which will enable us to say of every detail "This could not be otherwise," "the system is self-explanatory" and everything "arbitrary"—the term arbitrary as naming a defect to be remedied constantly recurs—is explained away. It is "arbitrary" for instance, that we have the colours we have, and not others. Yes, but the valuable study is surely that of the capacities, *qua* expressive whole, of the colours we have. It is an old story, that to explain is not to account for *ab extra*, but to think in connexion with a whole. Even if such a theory could in any case justify itself purely in the end and *a posteriori*, which I hold to be impossible, it could not do so here. The proof, as Hume argued with respect to God's power and goodness, could go only as far as the known facts which favoured it, and must stop short with them. And no one can imagine the data of the universe to be exhaustible. Our task, then, seems to me to be set by these conditions. We have to apply a clue within the whole, not to construct a story of it from without. Not that our clue is irrelevant to the whole. Here again is a point where the author surprises us. "Our knowledge begins with the parts"; our knowledge of the whole is less than our knowledge of the parts (140). We see his meaning, of course. We dare not claim a knowledge of "the ultimate structure of the whole". Still, that the universe comes to us as a whole, is perhaps what is clearest to us about it.[1] It is interesting here that the author holds Pluralism and Cosmism "a much more definite and fundamental antithesis than that between Realism and Idealism" (142). And he may be right. But surely it is a difference of degree. Primarily the world comes to us as a whole, within which we discriminate differences, and may no doubt, ultimately and in theory, substantiate them.

Now what I seem to myself to find in all the acutely interesting latter part of this work, is *not* the attempt, which I desiderate, to show how in our experience and in our best insight perfection and imperfection, good and evil, time and eternity, penetrate one another and are locked in indissoluble concreteness. It is rather to show how we may represent them as terms in relation, by help of abstract plans, cycles of change and restoration contemplated by dreaming spiritual beings, an upward and a downward path which would separate, if I understand the matter right, man's fall from his rise (445).

The hypothesis which, in the end, is to sustain the intelligibility of the cosmos takes shape as follows. Successive discussion of the categories, orders, or forms of unity has rev aled no conception on which a self-explanatory system could be founded except that

[1] See *Studies in Hegelian Dialectic*, sect. 221, where Dr. McTaggart quotes

"We know what Heaven and Hell may bring,
But no man knoweth the mind of the King."

highest form of infinity, distinguished both from boundlessness as of space, and completeness as of a quality, which we think of as Perfection. "If a system is seen to be perfect, no further explanation need be sought. It is then apprehended as *causa sui*" (429).

The attempt to apply such an idea leads through the notion of a Creator—which makes shipwreck on the reasons that point to a finite god—to a different form of "teleological" notion, or notion incorporating the choice of the best (433). Such a notion involves in the first place the presupposition of a plan of the Cosmos, somewhat as might be illustrated by Hegel's *Logic;* and then the contemplation of it by an eternal spirit or spirits, which proceed to embody its requirements in the construction of a Universe or Universes. Each such construction would be a cycle or history, itself entertained as a dream by an eternal spirit, and the advantage of the theory, if I grasp it, is supposed to be that by postulating the eternal dreamer the cycle of events ceases to be in direct or primary time, having as it were an eternal being in that mind whose dream it is. The idea is drawn from the sense in which a tale presented to the imagination, though possessing a time within it, is cut apart from primary time, and becomes so to speak timeless. It is a succession, but does not pass away, and may persist for ages. Such a construction would be of the nature of a choice motived by perfection; and a universe or system of universes within a cosmos, so determined, would be self-explanatory. I presume that Leibniz, who is referred to in the argument (377) counts for a good deal in these suggestions. They are finally developed by illustration from Oriental philosophy, actually taking shape in a diagram in which the lesser cycle, included in the circle of the absolute which it touches at a single point, represents the linear course which in its successive segments, if I follow rightly, is both the downward and the upward path.

My difficulty in all this is, as I have indicated, that we seem to want an analysis in which the two circles, and the downward and upward segments of the cycle which stands for a world such as our own, should not be set out in relation but should be welded and interfused in an intense experience. The fall and the rise should surely go together. The filling of time does not get its eternity by being present to a dream consciousness, but by the nexus and concentration through which all history is in its every moment.

It does not help us, as I see the matter, to postulate perfection as an abstract character of the cosmos; our business in philosophy is to apply our clue in tracing a path, so far as may be, through our actual experience of evil, for example, and of contingency.

I am far from suggesting that Dr. Mackenzie makes no effort to deal, as it were from within, with contingency, change and evil. All of them, in principle, he interprets alike by the thought of the disruption of the whole "which seems to be a necessary antecedent to the process of its apprehension as perfect" (454). It is the term antecedent on which the difficulty of principle turns. "Being

a living whole it [the whole] is always in the making" (*ibid*). This seems fundamentally to give us what we want, the non-severance of perfectness and inperfection. But is it carried through?

I should have mentioned earlier Dr. Mackenzie's characteristic reference to the New Realists, in whom "because of their recognition of the reality of universals" (162) he finds a close affinity to such an idealism as that of Plato, and of whose protest against subjectivism he strongly approves.

So much of the excellence of this work lies in the spirit and freshness of its detail that its value must largely be lost in such a notice as the present. But its helpfulness as well as its attractiveness I have found for myself to be great.

BERNARD BOSANQUET.

Moral Values and the Idea of God. The Gifford Lectures at Aberdeen, 1914-1915. By Prof. W. R. SORLEY, Litt.D., LL.D. 16s. net. Cambridge University Press. Pp. 19, 534.

THE title of Prof. Sorley's Gifford Lectures suggests a comparison with Prof. Pringle Pattison's Lectures on *The Idea of God*. But the standpoint of the two books is different. Prof. Sorley writes as an ethical theist. 'The theistic view of the world which I have been considering is definitely an ethical view' (p. 473). His object is to establish the objective truth of the moral aspect of reality, and the validity of our moral judgments as at least equally important with our judgments of existence. This thesis naturally leads him to formulate a doctrine of values, a branch of philosophy which is more and more coming to hold a central position in all vindications of the spiritual character of reality. Before embarking on this discussion he is anxious to claim for ethics a position independent of metaphysical or physical theory. He considers that Cartesian rationalism, Hegelian idealism, and Spencerian naturalism all present ethics as derived from the conclusions of a systematic philosophy. The data, however, are insufficient. The study of ethics needs new concepts of its own, which cannot be unpacked from the generalisations of science. None of the philosophies above mentioned can do justice to moral experience, which has an important place in our consciousness, and must have a corresponding place in our theory of reality.

In enumerating the generic differences of value, he adds happiness to the familiar triad, beauty, goodness, and truth, but subsequently withdraws it, rightly as it seems to me, on the ground that happiness 'attaches itself to value of every kind' (p. 30). Happiness, in the sense of pleasure, has been used as a quantitative calculus for the other three, in the hope of reducing all values to a common standard. It is not a value among other values.

Values, it is often held, are 'only relative'. If this means merely that values are appreciated by the human mind, there is

the same reason for saying that facts are only relative. To deny the objective character of judgments of value is to reject the plain meaning of such judgments. When we say that anything is good, we certainly do not mean only that we like it. The purpose of knowledge is to understand the world, not our understanding of the world. If this is impossible, natural science must disappear with morality. We do not, except to a very limited extent, believe what we wish to believe, but what our environment obliges us to believe. The diversities of moral judgment are parallel to the diversities of scientific judgment; and no one has suggested that a man may, if he chooses, live in a geocentric universe. If, however, by 'relative' we mean that moral value always belongs to an existing concrete reality, Prof. Sorley holds that the moral judgment is relative: 'simple qualities,' not present in any consciousness, are not good or evil (p. 140). In summing up this argument, he says that the moral judgment claims objectivity, universality, and systematic or organic unity for its objects. Moral values are included in reality, and are manifested in conscious beings.

But how are these values related to the realm of existence generally? This question leads to a consideration of the famous theistic arguments. There have always been two ways of theism —that of the religious consciousness and that of reflective thought. Writers before Hume assumed too readily that religion and philosophy have the same God; but when a difference arises about the idea of God, the old proofs lose their cogency. Modern thought does not ask, Does God exist? but, How is the universe to be understood and interpreted? In spite of this, all the old proofs are valuable. The two motives of the Ontological Argument are the demand that our highest ideal shall not be severed from reality, and the intellectual desire for completeness in our conceptions. Of these the former tends to pass into the Moral Argument, the latter into the Cosmological. The second Argument, in asserting a First Cause, means that the scientific conception of cause is inadequate, and that cause should signify ground or reason. The name First Cause is unfortunate, for the demand is not less for a Final Cause. The theist objects that the law of invariable sequence is no explanation at all. I should add, much more strongly than Prof. Sorley, that invariable sequence has nothing to do with causation. The Teleological Arguments is not in principle distinct from the Cosmological. Even if the doctrine of evolution has put some of Paley's arguments out of date, we must admit that there is an adaptation, not accounted for by natural selection, between our reason and the cosmic order. The Moral Argument for the being of God is in Kant a means of uniting two disparate systems of conceptions. Without God, our moral ideas could not be realised in the world. God is brought in to resolve the dualism of nature and morality, two systems, neither of which, taken by itself, would need the hypothesis of a God. This cannot satisfy us. We must

try to show both that the moral order is objectively valid, and that actual experience is fitted to realise this order. The latter attempt is hopeless if we assume that a good world-order must tend to promote the enjoyment of conscious beings. But this hedonistic assumption is not necessary, and is contradicted by all experience. There is no justice for individuals, if justice means the award of pleasure and pain according to desert. But if the object of the world-order is the realisation of moral goodness in conflict with evil (and it does not seem that moral goodness can be actualised in any other way), the pessimistic position is turned. In order to justify the moral order, it is necessary only to prove that it tends to promote goodness, not that it tends to promote happiness; though observation confirms the belief that happiness is very slightly dependent on external conditions, the happiest lives, so far as we can judge, being often lived in very adverse circumstances. The author quotes a very remarkable sentence from Robert Louis Stevenson. 'That which we suffer ourselves has no longer the same air of monstrous injustice and wanton cruelty that suffering wears when we see it in the case of others'. These words are quite as true as La Rochefoucauld's cynical aphorism that we are all courageous enough to bear up under our neighbour's misfortunes.

In the controversy between monism and pluralism Prof. Sorley admits his sympathy with pluralistic idealism, which 'recognises the real world of persons as charged with the discovery and realisation of values, and interprets the apparatus of life and its environment as subordinated to this supreme purpose' (p. 485.) God is the perfect rather than the infinite Being, and what we know of Him is necessarily dependent on our experience of moral goodness in finite beings. At the same time, 'by ultimate reality is not meant material existents, or even the realm of persons, but that which is the ground of everything that is real. A comprehensive view of this ultimate reality must include an account of things and persons, laws and values' (p. 509). Here, if I am not mistaken, we can trace a wavering between personal idealism and Platonism. In other parts of the book 'things' appear to be mere instruments for the actualising of reality in persons.

The book is very clearly written and well arranged. It is with no wish to detract from its merits that I subjoin a few difficulties which have occurred to myself in reading it.

The contrast between the scientific and the ethical view of the world seems to me to be exaggerated. 'The aspect of value,' he says, 'is omitted by science'. Is this true? No doubt the scientific view of the world is an abstract view. The scientist leaves out of his purview those ethical values which Prof. Sorley rightly claims to be essential parts of reality; and being frequently a poor metaphysician the scientist thinks that he has eliminated value-judgments altogether. But it is easy to prove that his world is a mental construction which contains very much besides the atoms or units of electricity which are his ultimate realities. His

descriptions are charged with valuations, which reveal themselves in such words as 'progress,' 'degeneration,' 'higher' and 'lower' forms of life. And even if he could succeed in being impartial between a man and a microbe, is not the uniformity of natural law and the continuity of evolution, which the scientist sets himself to prove, itself a valuation? Is it not clear that he trying to interpret the world as a manifestation of the True, as Prof. Sorley is trying to interpret it as a manifestation of the Good? The author says, 'If we call truth a value, do we not thereby obliterate the distinction between cognition and appreciation?' (p. 31). But I doubt whether there is any cognition without appreciation. To dissever the two is to introduce a dualism which will trouble us all through our thinking. When he says (p. 286), 'There are aspects of experience which science does not touch . . . truth in scientific theorems and elsewhere,' I cannot understand him. Nor can I agree with him when, in his zeal to prove 'the catholicity of moral value,' he asserts that aesthetic and intellectual values are limited by external conditions which the social order has not put within the power of all, but reserves for those who are favoured by economic circumstances: moral values are not limited in this way. What economic advantages had Socrates, Spinoza, Böhme, Burns, Wordsworth, Charlotte Brontë, and many others whose minds have been their kingdom? It is internal, not external limitation which prevents the man in the street from being a sage or an artist. This strange opinion appears on page 49, and is repeated on page 343.

The error, as it seems to me, of holding that 'as long as we keep to the scientific interest thoughts of value do not arise,' is connected with the very questionable doctrine that 'value lies outside the scope of the natural sciences because they are concerned with the universal, and the individual is the home of value' (p. 111). To a Platonist this is flat blasphemy. 'The man of science must think himself out of that human prejudice which interprets all things as made for man' (p. 169). Are we to infer that the moralist, who gives way to this prejudice, is on higher ground? It would almost seem so; for we read that 'for man the world exists for the sake of personality and its worth' (p. 167). It is most strange that he should think that 'the cosmologies of Plato and Aristotle, of Plotinus and St. Thomas, even of Schelling and Hegel, were suited to a pre-Copernican universe of which man was the real centre' (p. 467). The three first, at any rate, were not guilty of such anthropocentrism as Prof. Sorley's own. His determination to find in moral purpose the meaning—almost the sole meaning—of the cosmic process leads him to shrink from the unanimous testimony of natural science about the fate of the world. Instead of attaching his faith in the conservation of values to the existence of a personal God, as Varisco does ('Value will or will not be permanent according as the divine personality does or does not exist'), he clings to the idea of a progressive increase of value in time;

and when science asserts that time will at last wipe out all human achievements and the memory of them, he argues that we have other sources of information—the objectivity of the moral values—which makes the scientific view of the future 'doubtful' (p. 174). But there is no room for doubt. As surely as the sun rose this morning, so surely will the time come when this earth and all who it inherit shall disappear like the unsubstantial fabric of a vision. If moral values are eternal, as we believe, it is not in time, but in the unchanging mind of God, that they are preserved. Varisco's statement is perfectly correct. All intrinsic values are supratemporal, and belong to the divine mind. It is probably Prof. Sorley's exclusive pre-occupation with morality, which can hardly exist as such in the eternal world, that makes him so indifferent to the Platonic conception of value. It would be difficult to maintain that beauty and truth have their home only in the individual. Prof. Sorley, as we might expect, argues that 'morality is lost' if we follow Plato and the mystics. But this need not be so if we hold that the ends of morality are supratemporal, while its training-ground is in time and space. This, it seems to me, is the only view which enables us to surrender without regret those theories of perpetual progress which science assuredly will not allow us to retain, and which no other line of enquiry can validate.

W. R. Inge.

The Philosophy of Plotinus. By William Ralph Inge, C.V.O., D.D. London, 1918. Longmans, Green & Co. Two vols. Pp. xvi, 270; xii, 253.

The Dean of St. Paul's work on Plotinus, which has long been known to be in preparation and would presumably have been in the hands of readers sooner but for the delivery of its substance as Gifford Lectures in the University of St. Andrews for 1917-1918, is sure of a warm welcome both from theologians and from students of Platonism. Dr. Inge's long and loving study of Plotinus has given him a right to speak with special authority as an interpreter of Neo-Platonism, and the value of his work to those more particularly interested in the theory of the religious life is further enhanced by his wide knowledge and firm grasp of the higher mystical and devotional literature of Christianity. He further brings to his task wide and catholic sympathy with all that is finest in philosophy, art, and literature, keen insight into the special difficulties which attend the attempt to live up to humanity's highest level in our troublous time, and a fearlessness none too common among the Churchmen of our day, in speaking wholesome but unpalatable truth. All these qualties in combination were bound to result in a remarkable book, remarkable not merely as a deeply sympathetic interpretation of one of the great ancients, but as an invigorating help to the living of life in the right spirit under the stress of the

untoward circumstances which most of us who are now mature, at any rate, must expect to beset us for the rest of our days.

As equipment for the study of Neo-Platonism the English reader will henceforth find Dr. Inge's volumes, together with Mr. Whittaker's historical study, indispensable. And it may be doubted whether two works of such value in this particular department are to be found in the literature of any other modern language. It will hardly be thought necessary for me to recommend Dr. Inge's work further by elaborate encomium or to present the readers of MIND with a detailed abstract of its contents. Good wine needs no bush, and any one who wishes to understand Plotinus will in any case have to master the Dean's exposition for himself. Hence I propose to confine this notice to a very few remarks, chiefly on points where Dr. Inge does not wholly carry me with him, though my inability to follow him wherever he leads must not be supposed to detract in the least from my admiration for the way in which his work has been done.

I may express regret for one thing for which Dr. Inge is not in any way responsible. It is a pity that the external form of so fine a work should suffer both from the badness of the paper on which the book is printed and the low level of correctness reached in the printing (especially the accentuation) of the Greek quotations with which the lectures are documented. Probably however both these deficiencies are unavoidable in a book produced under the conditions of the last few years. I pass on to one or two more serious points. It would be an impertinence to dwell on the great general excellence of Dr. Inge's scholarship, but the best of us make slips at times, and I think I have noted a few cases where a misrendering, or the adoption of a probably unsound reading, has affected Dr. Inge's view of a passage.

The saying of Petronius about the city where the gods are more numerous than the men does not refer, as Dr. Inge seems to suppose (vol. i., p. 36) to Rome, but to Capua; these over-plentiful deities do not belong to the "Roman pantheon". When we are told that the mediæval hell with its tortures is a "legacy from Persian thought" through Manichaeism (*ibid.*, p. 45) is it not forgotten that the Christian Church got its ideas on these points very much from Virgil, who in turn was utilising the myths of Plato? In the footnote to page 51 of the same volume, it seems to be forgotten that the horrible "witch-trials" do not really belong to the "Middle Ages". The trial of Joan of Arc is one of the very earliest, and the worst horrors all belong to the ages of the Renaissance and the Reformation. It is a singular fact that it is just the very "darkest" age which seems to have been freest from this particular evil. In the really "dark" ages it was not so much witchcraft as the bringing of charges of witchcraft which was looked at askance, apparently because it was still the tradition that magic was part of the imposture of Paganism which it was the business of Christians not to believe in. When we are told on page 80 that the "last phase" of

Greek philosophy was "theocentric,' it seems to be forgotten that the formula "not man, but God, the measure" comes straight out of Plato's *Laws*. The "fantastic love of numbers," mentioned on page 84 as ensnaring Plato, is an odd name for the scientific study of the properties of the different classes of number which still occupies the pure mathematicians,[1] and one would like to know Dr. Inge's authority for saying on the next page that the Pythagoreans regarded their founder as a god. Dr. Inge's mathematics are sadly at fault when he says on this same page that Pythagoras "discovered the ratios of the octave, the fifth and the fourth, contained in the harmonic progression 12, 8, 6". The "ratio of the fifth" is, of course, 9 : 6, and 9 is not a term of the harmonic progression in question, but of the *Arithmetic* progression, 6, 9, 12.[2] I do not know that there is any evidence for an assertion made on page 86, and frequently repeated, that the doctrine of re-incarnation, as held by the Pythagoreans, is a modification of an earlier theory of the incarnation of a tribal soul in the successive generations of the tribe. We know of plenty of savages from the Australia Arunta upwards, who believe in individual re-incarnation, but do we know of any who believe in the "tribal soul"? I suspect this creature to be an invention of Auguste Comte. In Greek literature from Homer onwards ψυχαὶ are *always* the ψυχαὶ of individuals. The κόσμος, indeed, according to Platonism, has a soul, but the κόσμος is one individual animal, a ζῷον, not a "race". And I should be content to appeal to scholars on the simple point whether such an expression as ἡ τῆς Ἑλλάδος ψυχὴ would not be felt in Greek as a particularly daring and conscious metaphor. Indeed, when one comes to reflect that it is manifestly the experiences of dreaming, trance, and the like which gave rise to the primitive notion of the ψυχὴ as a "man within the man," it seems obvious that the belief in ψυχαὶ of individuals must come first. Dr. Inge's version of the facts seems to me to rest on a mere misinterpretation of the institution of the blood-feud, and to take no account whatever of the elementary fact that what ψυχὴ meant in Greek, until Socrates got hold of the word, was just "ghost," the thing a man "gives up" when he dies, or sends abroad in a dream or an epileptic fit.

In general Dr. Inge seems to me to suffer from an inability to make up his mind on a question which is of great importance for a

[1] Would Dr. Inge speak of Frege or Cantor as "ensnared" by the "fantastic love" of numbers? Yet Frege's *Grundgesetze der Arithmetik* in particular is entirely given up to the very kind of problem we know to have occupied Plato's attention. Indeed Frege's work might, in our day, admirably serve Plato's purpose as a βάσανος of the "ageometrete". If you understand Frege, you will have no difficulties about the εἴδη. If you find Frege's work baffling, you would do well to let the εἴδη alone.

[2] Plato himself is careful to point out in the *Epinomis* that both the A.P. and the H.P. are required for the "octave," and the object of employing a "double" Geometrical Progression in the *Timaeus* is also to get both the λόγος ἡμιόλιος and the λόγος ἐπίτριτος into the formula on which the World-Soul is constructed.

definitive interpretation of Plotinus. I do not think he has himself a very coherent view of the philosophy of Plato, and the same remark applies to the predecessors of Plato. In what Dr. Inge has to say about these "ancients" I seem to detect a fusion of incompatible interpretations drawn partly from Prof. Burnet and partly, as I seem to divine, from Mr. Cornford. This hesitation about Plato may not much affect Dr. Inge's understanding of the substantive doctrine of Plotinus, but it does seriously affect our judgment on his relation to the great philosopher whose thought he believed himself to be reproducing. It is a striking fact that, though Dr. Inge devotes a good deal of his space to Plato, he seems quite unfamiliar with the formal exposition of the Platonic doctrine of God in the Tenth Book of the *Laws*.[1] When he wishes to ascertain Plato's views on theology he regularly has recourse not to this scientific exposition but to the *Timaeus*, which is a less safe guide for the double reason that the dialogue is of the nature of a cosmogonical myth, and that the author's utterances are dramatically circumscribed by the necessity of accommodating them to the personality of his fifth-century Pythagorean astronomer. I think that, admirably as Dr. Inge knows his Plotinus, his work would have gained in value if he had known the history of early Greek speculation half as well. He would not then, for example, have written on vol. i., page 108, as though Platonism had suffered an eclipse during the whole period from Plato to the age of Philo.[2] He would have been aware not only that the Academy itself suffered no such eclipse, but that the development of Stoicism into a doctrine for mankind at large was only made possible by Posidonius, who virtually incorporated Platonism wholesale into his exposition of the Stoic system. I might note that it is a little under the mark to exempt "the scientific treatises" of Aristotle from the literature familiar to Plotinus (vol. i., p. 111). The *Enneads* are full of criticism of doctrines from the *Categories*, the *Physics*, the *De Caelo*, the *De Generatione*, and the *De Anima*. Careful scrutiny would, I feel convinced, reveal a still deeper debt to Aristotle. Perhaps Dr. Inge has been misled by the rarity with which Aristotle's name is mentioned in connexion with these criticisms. Occasionally, I think,

[1] He is even not quite clear on the all-important point that Plato's God is a ψυχή and that no ψυχή is an εἶδος.

[2] The common story that with Arcesilaus the Academy became "sceptical" seems to me to have no further basis than the simple fact that the literary output of the school took the form of criticism of the Stoic empiricist dogmatism. But Plato himself held as strongly as anyone that empiricism leads to scepticism. That the New Academy did not neglect the positive side of Platonism is surely proved by its careful preservation of the work of the Old Academy, with which the author of the anonymous *Commentary on the Theaetetus*, Plutarch, Proclus are all familiar, and again by the thorough understanding of Plato's point of view shown by such a writer as Atticus in the second century of our era. That the professed sceptics always refused to recognise the Academy as sceptical points to the same conclusion.

the actual interpretation of Platonic passages a little at fault. For example, it is hardly accurate to say (i., p. 144, n. 2) that the πλανωμένη αἰτία of the *Timaeus* is the "*mechanical* cause". For what the modern reader would take this to mean is that this αἰτία operates with a routine uniformity, whereas it is precisely its incalculability on which Timaeus means to insist. The name is probably connected, as Prof. Burnet has suggested, with that of the πλανῆται, the "tramps" of the heavens, and it is above all things the irregularities in their visible movements which the πλανωμένη αἰτία is meant to account for. It is the "contingent," rather than the "mechanical" aspect of things. So I think it is really a piece of misleading modernising to compare the relation of νοῦς and νοητόν with the relation between Energy and Matter in modern Physics (i., p. 151). "Energy"—if we mean kinetic energy in terms of which all other energy has to be evaluated—is itself just one of the νοητά. I do not know what Dr. Inge has in his mind when he says (*ibid.*, p. 155) that Anaxagoras' νοῦς was intended "rather to account for the creation of an ordered universe than for its working". If Dr. Inge will look at the remains of Anaxagoras, he will see that this is exactly wrong. It is the "working" of our part of the universe which is traced to νοῦς; creation is explicitly excluded from the philosophy of Anaxagoras, as it is from Ionian science in general. If the remark is intended to reproduce the criticisms of Socrates (and Aristotle) on the Anaxagorean νοῦς, Dr. Inge has got hold of a wrong point. The complaint was not that Anaxagoras did not explain the "working" of the world (Socrates in the *Phædo* implies that he did make the attempt), but that he made no use of the principle of the "choice of the best". I think it also a defect in the account of Plotinus' doctrine of the "sensible world" that no explanation is given of the Stoic conception of φύσις as one term in the series of ascending "potencies," and the implied distinction between φύσις and ψυχή, since the Stoic use of the term φύσις is so constant in Plotinus, and I also regret that another common Stoic technicality, σπερματικὸς λόγος, should be habitually paraphrased rather than translated. I suppose that it is asking too much of a philosophical writer to discuss Time without dragging in M. Bergson, but I own I do not see that the doctrine of M. Bergson really throws any light on that of Plotinus. When Plotinus, for example, criticises the Peripatetic definition of time as the "number of motion," his point has nothing to do with views of the Bergsonian type. He wishes merely to insist that "number" as such is logically prior to its applications; he is, in fact, dwelling simply on the independency of the notion of cardinal number. It is Dr. Inge, not Plotinus, who is responsible for the view that there are (i., p. 172) contradictions which "inhere in the notion of Time". And when Plotinus speaks of "real" Time, he means just what M. Bergson does not mean, "Newtonian" Time. Altogether Dr. Inge's mathematics, and to a lesser degree, his physics, strike me as not the happiest part of his book. They are

hardly what one would expect from a professed Platonist, though they are, to be sure, no worse than Aristotle's. It is odd, for example, that Dr. Inge should express a certain approval of the belief in recurrent world-cycles without a hint that the second law of Thermo-Dynamics creates a difficulty for him.

I am a little surprised, again, that Plotinus' mention of the brain as the central organ of the "nervous system" should be taken as evidence that he knew how to "make use of the new science of Galen". That the brain is "what we think with" had been the doctrine of Alcmæon of Crotona in the sixth century B.C. From the medical school of Crotona it had spread to the "Italian" philosophers, and is duly recorded by Socrates in the *Phædo* as one of the theories which had interested him in his early days. For the same reason Timaeus is made to teach the same thing in Plato. It had also been the doctrine of Hippocrates. It is probably a mistake to translate the Stoic *καταληπτικὴ φαντασία* (i., p. 230) "*irresistible* impression". It means rather a judgment in which *I* "convince" or "convict" the object of having certain characters.[1] This is, to my mind, proved by the fact that the recognised sceptical reply to the Stoic's assurance was *οὐ καταλαμβάνω*, "*I* decline to convict". From the Stoic point of view *κατάληψις* is an *activity* of the mind and finds expression in a judgment (*κρίσις*).

A sentence on page 239 of vol. i. gives me occasion to protest against a misapplication of an Aristotelian phrase which threatens to become established among us (the more as Dr. Inge makes the same mistake elsewhere). The words *διάνοια αὐτὴ οὐθὲν κινεῖ* do *not* mean "*discursive* thought (as contrasted with some superior kind of thought) moves nothing". In fact the opposition of *διάνοια* as a lower kind of thought to *νόησις* as a higher only occurs in Plato in the passage of the *Republic* where Plato wants a special word to distinguish mathematical deduction from the critical examination of the postulates of the mathematical sciences. When Aristotle makes the observation just quoted, his object is not to distinguish an inferior from a superior kind of thought but to distinguish "mere thought," "thought not further qualified" from practical thought, thought directed on an object of appetition, as is shown by the words which immediately follow. The full quotation is *διάνοια αὐτὴ οὐθὲν κινεῖ ἀλλ' ἡ ἕνεκά του καὶ πρακτική*, "thought by itself leads to no movement, only thought with a purpose in view, *i.e.*, practical thought". The suppression of the second half of the sentence and the misleading insertion of the word "discursive" completely pervert Aristotle's meaning.[2]

[1] For the juridical metaphor compare *κατηγορεῖσθαι*, to be predicated, and its cognates. The predicate is thought of as a "charge" formulated against its subject. *κρίνειν*, *κρίσις*, of course, also have the same ring about them. The "judgment" is the "finding" of a court.

[2] Also the point in which—in the specific passage of the *Republic*—*νόησις* is contrasted with *διάνοια* seems to me to be misrepresented when *διάνοια* is rendered "*discursive* thought". All thinking is "discursive," and it is surely clear from Plato's own account of dialectic and its employment on

There is a curious mistranslation of Plotinus himself at i., page 257, where we are told that "the Universal Soul governs the world by simple commands; individual souls by direct creative activity (*αὐτουργῷ τινι ποίησει*)". Of course "creative activity" belongs, as Dr. Inge is of course aware, even more to the *ψυχὴ τῶν ὅλων* than to the *μερικαὶ ψυχαί*. *αὐτουργὸς* means simply "one who works with his own hand" as opposed to the superior workman who directs the operations of others. Euripides calls Electra's nominal husband an *αὐτουργὸς* meaning precisely that he cannot afford to employ "labourers" on his farm, but has to till it for himself. So Plotinus means that your soul or mine, in weaving its body, is, so to say, a "hand" in the employ of the "soul of the whole".

When we turn away from such small points of detail, the chief criticism to which Dr. Inge, as I think, lays himself open is that he is perhaps too exclusively interested in the religious faith and *Religionsphilosophie* of his author. These he expounds with real mastery and in language often of singular beauty. There is probably no existing work from which so admirable an account can be got alike of the ascent of the soul to God as conceived by Neo-Platonism and of the philosophical theories presupposed in the doctrine of the soul's ascent, and it would be hard to find words adequately to express the service that Dr. Inge's exposition has rendered to rational piety and to the philosophy of religion. I hope it will not seem thankless if I venture to remark that Plotinus was not only a great saint and a profound thinker about the problems of the religious life, but more generally a great metaphysician, and that there is very much in his metaphysics which is of high importance and interest, though not very directly connected with his religion. Dr. Inge has perhaps thrown all this side of Plotinus unnecessarily into the shade. For instance, the longest single work comprised in the *Enneads* is the criticism of the doctrine of the "categories" which runs through the first three "books" of the sixth *Ennead*. The discussion is full of acute observations and often anticipates much that has come to the front in modern researches into the "theory of knowledge" and the "logical foundations of the exact sciences". But Dr. Inge's own interests do not lie in the direction of *Categorienlehre*, and he consequently gives but a very inadequate account of this section of the *Enneads*, which he regards as "not quite worthy" of the author. I am not so unreasonable, when I remember what Dr. Inge has given us, as to complain that he is not equally interested

the postulates of geometry that the philosopher's *νόησις* does not mean "intuition" but critical analysis of what have hitherto been accepted as ultimate truths. The inferiority of *διάνοια* does not lie in being "discursive" but in taking its postulates for granted *without* "discoursing" about them. It leaves that inquiry into the truth of a postulate itself of which the *Phædo* speaks unattempted, and *confines* itself to examining the *συμβαίνοντα* which follow from the uncriticised admission of the postulate. The rendering of the word "*discursive*" thought really falsifies Plato's point.

in all questions of philosophy. But I may perhaps be allowed to say that, just because his interest in this side of philosophy is not very strong, the reader who means to understand Neo-Platonism thoroughly will need to retain Mr. Whittaker's book as a guide side by side with these lectures.

There are certain points which are made very prominent in the lectures on which the reader will probably feel that he desires more information not so much about the views of Plotinus as about those of Dr. Inge. For my own part, I feel this very strongly whenever the exposition touches upon the reality and significance of the temporal. Dr. Inge is one of those philosophers who seem to think Time a sort of unfortunate blunder on the part of the "One". He appears to be constantly anxious, as far as he can, to reduce the temporal to the level of a mere delusive appearance. Thus in his long examination of the Immortality of the Soul I seem to find a hesitation between the genuine Neo-Platonist view that Time is a condition of the exercise of the Soul's capacities and a very different view, not Neo-Platonic at all, which treats Time as an illusion, and if thought out, is quite inconsistent with any real belief in any kind of Immortality. I cannot believe that Dr. Inge really holds this second view with his eyes open, just because it is so clear to me that he would have to abandon his discipleship of Plato and Plotinus if he did. But he does seem to me to put it forward from time to time, and in a rather crude form, where it is really out of place. There can really be no sort of doubt that on the Neo-Platonic view existence in "eternity" and existence "in time" mutually imply one another; one of them is not the "mere appearance" of which the other is the reality.[1]

So I find myself in a similar uncertainty about Dr. Inge's real opinion on the point of difference between Neo-Platonism and Christianity, which is, of course, precisely the question of the reality of the entrance of the Divine into the historical life of humanity. In one place Dr. Inge repeats the famous criticism of St. Augustine on the limitations of the "Platonist" doctrine as if he wholly sympathised with it (as I admit I do myself). Yet in his eloquent and fascinating "pirlicue," when he is dwelling on the spiritual sustenance we may draw from Plotinus amid the troubles of our own anxious time, he speaks of the absence of the historical from the faith of the Neo-Platonist as an advantage. Now it cannot both be a defect of the "Platonists" that one must go elsewhere to learn the supreme truth about the Divine self-surrender, the fact that the Word "entered humanity," and also a merit of their belief that it has no attachment in historical fact One knows where Plotinus stood in this matter. It is pardonable to feel that one would like to know where Dr. Inge stands.

A. E. TAYLOR.

[1] Baron von Hügel's doctrine of the "compenetration" of Time by Eternity, on the other hand, seems to me the genuine Neo-Platonic theory.

VI.—BOOKS RECEIVED.

Charles Augustus Strong, *The Origin of Consciousness*, London, Macmillan & Co., 1918, pp. viii, 330.

Joseph Jastrow, *The Psychology of Conviction*, Boston and New York, Houghton, Mifflin, Co., London, Constable & Co., 1918, pp. xiii, 387.

Roy Wood Sellars, *The Next Step in Religion*, New York, The Macmillan Co., 1918, pp. 228.

S. Radhakrishnan, *The Philosophy of Rabindranath Tagore*, London, Macmillan & Co., 1918, pp. xi, 294.

H. J. W. Hetherington and J. H. Muirhead, *Social Purpose : A Contribution to a Philosophy of Civic Society*, London, George Allen & Unwin, New York, The Macmillan Co., 1918, pp. 317.

Mary W. Calkins, *The Good Man and the Good : An Introduction to Ethics*, New York, The Macmillan Co., 1918, pp. xx, 219.

Hyman Segal, *The Law of Struggle*, New York, Massada Publishing Co., pp. 161.

Rupert C. Lodge, *The Meaning and Function of Simple Modes in the Philosophy of John Locke*, Bulletin of the University of Minnesota, 1918, pp. vi, 86.

Abraham A. Robeck, *The Interference of Will-Impulses*, Princeton, Psychological Review Co., pp. viii, 158.

Charles Mercier, *Crime and Criminals*, London, University of London Press, 1918, pp. xvii, 291.

Stewart A. McDowall, *Evolution and the Doctrine of the Trinity*, Cambridge University Press, 1918, pp. xxvii, 258.

A. Porot et A. Hesnard, *L'Expertise Mentale Militaire*, Paris, Masson et Cie., 1918, pp. 137.

W. S. Urquhart, *Pantheism and the Value of Life*, London, The Epworth Press, 1919, pp. xii, 732.

Studies in the History of Ideas, New York, Columbia University Press, 1918, pp. 272.

Wilmon Henry Sheldon, *Strife of Systems and Productive Duality*, Cambridge, Harvard University Press, 1918, pp. x, 534.

Edward Mercer, *Why Do We Die?* London, Kegan Paul, Trench, Trubner & Co., 1919, pp. 202.

S. G. Hefelbower, *The Relation of John Locke to English Deism*, Chicago, The University of Chicago Press, 1918, pp. viii, 188.

Ignatius Singer, *The Rival Philosophies of Jesus and of Paul*, London, George Allen & Unwin, 1919, pp. 347.

Bertrand Russell, *Introduction to Mathematical Philosophy*, London, George Allen & Unwin, 1919, pp. viii, 208.

William Ernest Hocking, *Morale and its Enemies*, Yale University Press, 1918, pp. xv, 200.

Henry H. Slesser, *The Nature of Being*, London, George Allen & Unwin, 1919, pp. 224.

Isador H. Coriat, *What is Psycho-analysis?* London, Kegan Paul, Trench, Trubner & Co., 1919, pp. 124.

Walter R. Miles, *Effect of Alcohol on Psycho-Physiological Functions*, Washington, Carnegie Institution of Washington, 1918, pp. 144.

Frank C. Constable, *Myself and Dreams*, London, Kegan Paul, Trench, Trubner & Co., 1919, pp. xii, 358.

Florian Quaniecki, *Cultural Reality*, The University of Chicago Press, 1919, pp. xv, 359.

F. Matthias Alexander, *Man's Supreme Inheritance*, London, Methuen & Co., 2nd Edition, 1918, pp. xxviii, 239.

VII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. xxvii., No. 3. **C. A. Richardson.** 'Scientific Method in Philosophy and the Foundations of Pluralism.' [The two most important tendencies in modern philosophy are spiritualistic pluralism, with its genetic method, and the new realism, with its scientific method; the former is the outcome of empiricism, the latter is the true progressive product of rationalism. The scientific method, investigating the logical form of facts, is limited by the conceptual standpoint; critical and constructive in its own sphere, it becomes arbitrary in its attempt to demarcate the province of philosophy; in particular, its ignoring of the subject rules out certain problems (*e.g.*, the ethical) and forbids the supplementing of description by explanation. Pluralism starts out from the self, a true unit, whose essential nature we actually realise; its genetic method enables us to give explanatory value to such concepts as causality, continuity, substance, activity; avoiding the introduction of unknowns, it brings home to us the nature of existence in general in an unique way.] **J. E. Creighton.** 'The Social Nature of Thinking.' [As we have transcended the doctrine of social contract in political philosophy, the hedonistic and intuitional theories of morality, and the classical forms of political economy, so must we also transcend individualism in logic, and recognise that the intellectual life can be realised only through membership in a social community.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.—Vol. xxvii., No. 4. **E. Albee.** 'Philosophy and Literature.' [Philosophy, which aims to be objective and universal, still cannot deal wholly impersonally with personality itself; and literature, which is frankly temporal and national, still makes in its highest forms a universal appeal.] **M. De Wulf.** 'The Teaching of Philosophy and the Classification of the Sciences in the 13th Century.' [The philosophical programme of the University of Paris is closely connected with a classification of human knowledge (science, philosophy, theology) accepted by all scholars of the 13th century; its notes are cosmopolitanism, serene optimism, and religious faith.] **H. Haldar.** 'The Absolute and the Finite Self.' [An idealism which regards the Absolute as the individualisation of the perfect selves into which it is differentiated for the realisation of its own purpose can incorporate within it pluralism and realism, but not panpsychism.] **C. A. Bennett.** 'An Approach to Mysticism.' [All the chief characters of the mystic (renunciation of thought, passivity, naive optimism, inability to formulate the contents of his illumination) have fruitful analogies on the familiar levels of life.] **A. E. Avey.** 'The Present-Day Conception of Logic.' [Modern logic has gained by generalisation (the 'science of relations' replacing the 'science of the laws of thought'); by the recognition of inference 'by added determinants' and 'by complex conception'; and by express consideration of the inner structure of the term.] **K. E. Gilbert.** 'The Mind and Its Discipline.' [Formal discipline is sanctioned by a conception of the mind as universal or general function, characterised by the original spontaneity and general connectedness of consciousness.] Summaries of Articles. Notes.

PSYCHOLOGICAL REVIEW. Vol. XXV., No. 3. **H. H. Bawden.** 'The Presuppositions of a Behaviourist Psychology.' [Mind names the fact of the control of the environment in the interest of the organism through the interaction of inherited capacities and acquired abilities. Mind is thus a relation within behaviour, the class-name for an assemblage of particular facts of adaptation and adjustment.] **K. Dunlap.** 'The Significance of Beauty.' [Beauty is the sign and expression of an individual's potentiality for the species. The most beautiful are those whom we should choose to be co-parents of our children, if we considered nothing but the highest mental and physical welfare of these children.] **J. Peterson.** 'The Functioning of Ideas in Social Groups.' [Social psychology has not realised the implication of 'idea' in genesis and *modus operandi*. An idea is an acquired, more or less detachable, stimulus-response disposition or habit. From this point of view such concepts as imitation, suggestion, consciousness of kind, repression, demand and receive new explanations.] **R. M. Ogden.** 'The Attribute of Sound.' [The attributes are pitch, volume, intensity, duration, and probably brightness. By appropriate mental acts, these attributes are worked up into the resultants of tone, vowel, and noise.] **G. W. Stewart** and **O. Hovda.** 'The Intensity Factor in Binaural Localisation: and Extension of Weber's Law.' [Experiments with simple tone show that the observer's response as indicated by the constructive angular displacement is proportional to the logarithm of the ratio of the two stimuli.] **R. Pintner.** 'The Mental Indices of Siblings.' [Group-tests prove that on the whole the general intelligence of siblings is more nearly alike than that of unrelated children selected by chance. The resemblance is due to inheritance.]

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. XXIX., No. 3. **H. J. Mulford** 'The Human Mind: a Suggestion as to the Coustitution of Normal, Subnormal and Supernormal Mind.' [To know mind we must know brain; and to know brain we must study its phylogenesis. The feeble-minded brain is essentially motor or reflex. The normal brain shows the motor and thought functions in co-operation. The supernormal brain combines the functions of the future with the structures of the present; its function must therefore be slowed down.] **M. Otis.** 'Æsthetic Unity: an Investigation into the Conditions that Favour the Apperception of a Manifold as a Unit.' [Experiments on the effect of position, form, colour, direction, and size. Where there are two unit-making factors in opposition, the one may be subordinated; or the secondary may add a constructive element; or there may be temporary or permanent confusion.] **G. C. Myers.** 'Some Variabilities and Correlations in Learning.' [The relative ranking of individuals of a group working at the same task for a long period of time tends to remain constant. In the average mental test, a few trials are as good as an infinite number.] 'Minor Studies from the Psychological Laboratory of Vassar College' **M. Montague, M. M. Reynolds,** and **M. F. Washburn.** 'XXXIV. A Further Study of Freshman.' [Failure to get above the lowest quartile in two or more freshman tests indicates nearly equal chances that the student will withdraw before the beginning of the senior year.] **M. E. Cobb, M. Kincaid,** and **M. F. Washburn.** 'XXXV. Further Tests of the Verbal Ability of Poor Spellers.' [Good spellers have the greater verbal ability, as measured by number of words formed from a given set of letters.] **J. Cattell, J. Glascock,** and **M. F. Washburn.** 'XXXVI. Experiments on a Possible Test of Æsthetic Judgment of Pictures.' [Assigning low rank to a good picture is a better indication of poor artistic judgment than assigning high rank is of good judgment.]

E. B. Titchener and **H. P. Weld.** 'Minor Studies from the Psychological Laboratory of Cornell University.' **E. de Laski.** 'XLII. The Psychological Attitude of Charles Dickens towards Surnames.' [Dickens is not exceptional either in his responsiveness to names or in his mode of their formation; but his names indicate a tendency to look down on his characters.] **C. B. Moore.** 'Notes on the Presidents of the American Psychological Association.' Book Notes.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. XV., 12. **E. E. Sabin.** 'Some Difficulties in James's Formulation of Pragmatism.' [It is criticised from the standpoint of a more advanced pragmatism, and charged with confusing knowledge of the reality of an object with knowledge of the truth of a judgment, with describing backward-looking verification instead of forward-looking cognition, and with failing to identify his 'pure experience' with the dynamic conception of the 'fringe' which contains the future acting in the present.] **A. I. du P. Coleman.** 'The Most Desirable Macaria.' [A plan to endow research.] **A. T. Kitchel.** 'Idealism on an Azalea Bush, or Practice and the Ego-Centric Predicament.' [Men really seek knowledge enough to act successfully and ego-centric idealism would not work.] XV., 13. **P. Ackerman.** 'Some Aspects of Pragmatism and Hegel.' [An ingenious paper which argues that the whole of pragmatism has been anticipated by Hegel and that the differences are unessential. This feat is achieved by (1) ignoring the contrast between the empiricism and pluralism of pragmatism and the apriorism of Hegelism, and making its 'logic' not creative *a priori*, but "only an *ex post facto* analysis of knowledge" and the general scheme of a method any one can use; (2) by contending that pragmatism 'presupposes' essential notions of rationalism, *viz.*, an antecedent knowledge that the world is amenable to purposive manipulation, has a structure (because metaphysics is the description thereof), is determined (because it is predictable and because "continuity involves determinism"), is a paradoxical whole created by its parts and nevertheless prior to them (because Dewey has said that the practical judgment is itself the chief factor in making the situation about which it is judging, and lastly, because it admits that "a question presupposes its (*?an*) answer"). (3) As for the crux about Time, it is not clear that Hegelism denies it altogether or that experimental logic need regard the time order as vital to the establishment of the logical order. (4) As for the pragmatist criticism of idealism that it is (*a*) dualistic, and (*b*) denies distinctions, Hegelism is not dualistic, and its 'fixed object' makes knowledge possible, not superfluous. If the dilemma of knowledge is 'either unnecessary repetition or meaningless manipulation,' and pragmatism has chosen the latter, it has not chosen the better part.] **H. L. Hollingworth.** 'Report on the New York Branch of the American Psychological Association.' XV., 14. **M. R. Cohen.** 'Mechanism and Causality in Physics.' [Concludes that "mechanism has failed as a final and complete account of physics. An adequate analysis of its progress bears out the contention that not ὕλη, formless matter or blind sensation, but mathematical and logical relations form the intelligible substance of things. But that the world contains more than this intelligible substance, our emotions and actions amply testify."] XV., 15. **W. M. Urban.** 'Again, the Value-Objective and the Value-Judgment: Reply to Prof. Perry and Dr. Fisher.' [*Cf.* XIV., 7, 21. An elaborate reply which brings out as new points that in Urban's view 'oughtness' is not identical with 'obligation' but is 'the more general category' of which obligation is a special case, and that there is "an almost inevitable equivocation in the truth concept," because though "every judgment lays claim to truth,"

there is "judgmental knowledge" "which does not assert the existence of the object either explicitly or hypothetically".] **L. Brink.** 'How the Concept of the Unconscious is Serviceable.' [It "has been adopted to express a conviction of the survival of a vitally affective past which influences the present, and to make this accessible to advancing scientific investigation," and no one who has been present at a psycho-analytic 'confessional' and watched "the struggle with repressed memories and painful disturbance occasioned by displaced affect" and "the struggle into consciousness of some forgotten, now unconscious experience" can doubt "the actuality of repressed memories and their psychic vitality".] **W. T. Bush.** 'Another Comment on Prof. Warren's Analysis of Purpose.' [Admitting that 'purpose' or 'freedom' is not 'scientific,' and must be non-suited if universal determinism is assumed, it may yet be held that this assumption is only methodological and adopted for the practical control of events.] xv., 16. **G. Santayana.** 'Literal and Symbolic Knowledge.' ["The aim of intelligence is to know things as they are"—even in the knowledge required for successful practice. If, however, a representative theory of knowledge is adopted, it interposes a screen of instrumental ideas between the mind and things and provokes the sceptic to deny the need for any realities behind appearances. More specifically it can be denied that intelligence can gain its end (1) because "the very notion of an external reality to be known is absurd and self-contradictory," (2) because reality is such that it can be known, or (3) that *we* at least cannot know it. But (1) involves a denial that "intelligence 'points' as a dog does," and taking sense-data as 'signs,' can "when knowledge is perfect," realise its 'intent' "that the full essence of the object and nothing more should be present to the mind". Now such an essence everything must have; for "a being without any essence is a contradiction in terms". It may, however, be unknowable, in the sense that our faculties are not adequate to describe it. Also reality is ultimately to be known only as a *datum*, by 'intuition' and 'acquaintance'. Now intuition, though not inerrant, is 'transitive,' "since the essences it observes are independent of it . . . in character and identity, since, whatever is true of any essence is true of it always," and "knowledge of fact, while never demonstrably or absolutely sure, often reaches the highest degree of practical evidence". That, too, is fallible, but "hallucination, madness and dreams are soon cured or soon fatal". Still "the disparity between human ideas and natural things, though not absolute nor irremediable, is real and habitual". It need not breed scepticism, however, if it recognised that "knowledge of existences has no need, no propensity and no fitness to be literal". They need only be 'symbolic,' and though "the ideas we have of things are not fair portraits they are political caricatures made in the human interest, but very often, in their partial way, masterpieces of characterisation and insight". They do not form 'a screen.' because "there is no arrest of cognition upon them". Taken as passive they are "at best the essence of the thing, never the thing itself," but, taken functionally as symbols, they are "wholly and essentially transitive". Thus "knowledge of nature is a great allegory, of which action is the interpreter". "Perception is thus originally true as a signal, but false as a description," the "direct source of data" being "the organ in operation not the object". The conclusion is "that complete knowledge of natural objects cannot be hoped for. We know them by intent based on bodily reaction"; if they are to be known to the core "it must be through sympathetic imagination": for even an adequate knowledge of the essence "remains to a claim to the end, subject to the insecurity inseparable from animal faith".]

REVUE DE METAPHYSQIUE ET DE MORALE. Nov., 1917. **A. Darlu.** '*La Religion* de M Loisy.' [M. Loisy finds the common fundamental elements of all religion in Faith, Duty, and Self-sacrifice. In his insistence on the second he approaches M. Durkheim, in his humanitarianism he recalls Comte. His Catholic training enables him to see the importance of discipline, the absence of which he considers to be the main internal danger of modern democracy. M. Darlu points out that religion is distinguished from mere morality by adding a faith that there is a remedy for 'the injustice of *things*' to a hope of the gradual disappearance of the injustice of people.] **L. Dauriac.** 'Nécessité médiate et nécessité immédiate.' [An extremely long discussion of abstract ideas and the laws of thought, with many historical illustrations.] **A. Reymond.** 'Les ordinaux transfinis de Cantor et leur définition logique.' [Objects to Cantor's ordinals $\omega + 1$, $\omega + 2$ . . . etc., on the ground that, if the '1' here considered be the same as in the expression $n + 1$ it makes no difference to a number like ω, whilst, if it be a new kind of '1' the series $\omega + 1$, etc., needs a special justification which Cantor does not give. Accuses Cantor of confusing cardinals and ordinals, and helping himself out with a surreptitious reference to geometrical continuity. (To the present abstractor it seems that C. was quite clear on the point; that it is nonsense to talk of '1' in any unambiguous sense as 'having a power of ordination and a power of cardination,' the latter of which decreases as n increases; and that M. Reymond forgets that '1' and '+' stand respectively for a quite different entity and operation in cardinal and in ordinal arithmetic. An hour's study of the relevant §§ in *Principia Mathematica* may be recommended.)] **G. Guy-Grand.** 'De la liberté en temps de guerre.' [Confines himself to freedom of speech and publication. It cannot be maintained in principle that it is *never* right for a government to suppress the publication of opinions and even of facts known to neutrals and enemies. In peace it is better to let all opinions find their own level through free discussion; in war it is possible that the process, always lengthy, may lead to irretrievable disasters before it is completed. The greater suppression of unpleasant facts in France than in England or Germany may be defended in the one case by the fact that France is and England is not an invaded country, and in the other that Frenchmen (happily, the writer thinks) have not that blind confidence in their governors which Germans have so far displayed.] **E. Rignano.** 'La rénovation de l'école.' [Pleads for toys which shall be accurate models of real life. (Steam-engines are to be preferred to clock-work ones. I agree.) Geography and history to be taught not as masses of facts, but as bases for reasoning and comparison. Mathematics to be taught in close connexion with its physical applications. This demand is illustrated by the story of the mathematician who wondered what was 'this wretched π which turned up in almost all formulas'. (But why regard the ratio of circumference to diameter as *the* meaning of π?) Latin and Greek to be suppressed for all but specialists. Literature admitted as a relaxation from observation and reasoning and to inspire public spirit. Philosophy to be restricted to 'scientific synthesis,' classical systems of metaphysics to be expounded to students of literature as beautiful myths.] Nécrologie. [Émile Durkheim.] Jan.-Feb., 1918. **E. Durkheim.** '*Le Contrat Social de Rousseau*, histoire du livre.' [The C.S. was originally meant to form the fundamental part of a larger work called *Des Institutions Politiques*. The 'natural man' regarded by Rousseau as a psychological abstraction, *viz.*, a man with nothing but sensations and impulses and void of all that springs from life in society. Not devoid of pity, because this does not involve abstract ideas, but incapable of any extended benevolence and only preserved from constant fight-

ing by seldom meeting anyone else to fight with. This state happy, but unstable through the irregularity of external nature. Society is artificial for two reasons: (i) because it is circumstances external to man which force him into society, and (ii) because a genuine society is regarded as a new kind of individual by its members, and yet the notion of a person whose parts are persons is a fiction. 'C'est parce que la société est une organisme qu'elle est une œuvre d'art.' Rousseau held that actual societies were worse than the state of nature, because in them men are subjected to *arbitrary and variable* control; but he did not hold that society as such is necessarily worse than the state of nature. (A most illuminating commentary).] **H. Wildon Carr.** 'L'interaction de l'esprit et du corps.' [Takes as established the view that there are mental diseases of purely mental origin, and argues that body and mind interact as wholes. Distinguishes between the relations (1) of life and matter, (2) of mind and living organism. 'Body' here = 'living organism'. Interaction not a theory but a fact to be reconciled with other facts. Consciousness not a property of matter, and only seems so when we forget that it always involves memory and comparison. Mind characterised by continuity of memory, body by that of vital process; these are distinct, and gaps can occur in one without implying gaps in the other. (The facts quoted seem to me insufficient to support the view that there are ever gaps in the vital process so long as the body considered remains alive.) Mind has a definite organisation and structure of its own, as shown by the facts of repression, of planes of unconsciousness, and of their inner relations. (But surely we did not have to wait for Freud and his observations to tell us that our minds were different from our bodies.) Duration and activity are the fundamental factors in life; the former characterises the mind, the latter the body; action consists in differentiating a single unity according to two different plans. The relation between the two is one of solidarity or co-operation, not of causality.] **V. Delbos.** 'L'art et la science.' [Art involves fiction, which science condemns; the faculties of mind cultivated by science are opposed to those which produce great art; science favours a materialistic ideal of comfort by supplying the means to it. Hence it is concluded by many that art is doomed to decay. The author has no difficulty in showing that the first reason alleged is nonsense; as to the second he points out that the results of science may arouse æsthetic emotion and that a new theory is a work of artistic creation.] **H. Bourget.** 'Les mesures et notre connaissance du monde exterieur.' [Distinguishes sharply between *nombres exacts* like π and e which we can continue according to a definite known law as far as we choose and *nombres de mesure* which are what we actually observe and never extend to more than eight or so figures. We tend without justification to regard the latter as always approximations towards the former. Really we have no right even to substitute 0's beyond the last figure which our measurements give us, and all questions of incommensurability or transcendentality are out of place in *nombres de mesure*. It is particularly dangerous to add 0's in this unjustifiable way when large numbers of arithmetical operations have to be performed on these quantities, and, whatever may be said of the Method of Least Squares as a theory, lack of care on this point has vitiated many of its applications. The class of *nombres de mesure* is a finite class of finite rationals any two of which differ by a finite amount. Limits and differential equations are strictly out of place and can only be used in physics by postulating that our *nombres de mesure* represent *nombres exacts* in nature. (A very useful reminder for all of us.)] **E. Halévy.** 'Les *Souvenirs de Lord Morley*.' [A not very sympathetic account of Lord Morley's *Recollections*. Morley never mentions Mr. George. (But possibly he holds the charitable view that when one

can say nothing good it is best to say nothing at all.) 'Lord Morley finds nothing to do but write the epitaph of a century.' (Is a man of over eighty years of age to be blamed for doing this instead of trying to direct a war of which he disapproves or of engaging in a hopeless propaganda against it.)] **G. Aillet.** 'La Société des Nations.' [Discusses books by E. Milhaud and M. Leny. Disagrees with the former in thinking that non-arbitrable questions may arise between states. A very favourable account of the latter's work with some criticisms on points of detail.] Mars-Avril, 1918. **E. Durkheim.** '*Le Contrat Social* de Rousseau' (suite et fin). [To avoid the evils of the state of nature an authority is needed which in its strength and impersonality shall stand in analogous relations to the individual citizen to those in which the physical world stands to the natural man. Such an authority is found when all give up their actual possessions to an association which guarantees to each what it subsequently allows him to possess. The essence of such an authority is not its overwhelming strength (though this is practically important) but its impersonality and neutrality as between the citizens. The general will is the will for what will benefit each citizen; it is thus best ascertained if each voter votes independently of the rest, for then idiosyncratic variations will cancel out. This will not happen if men vote as members of parties or other associations, because the number of competing groups will be small. Hence R.'s horror of subordinate groups within a state. A government is necessary, but it is a necessary evil, and states always decay through the government confusing its private will with the general will. It needs an almost miraculous conjunction of circumstances to start a state on Rousseau's view, and a continual miracle to keep it together. (A most excellent account of Rousseau's theories.)] **G. Milhaud.** 'Note sur Descartes. Ce que lui rappelait la date du 11 novembre 1620.' [What is D. referring to in his marginal note: "*xi Novembris* 1620, *cœpi intelligere fundamentum Inventi mirabilis?*" M. Milhaud tracks it down to the discovery of the theory of telescopes, inspired by seeing Kepler's optical works in Prague after the battle there on Nov. 8th.] **V. Delbos.** 'L'Art et la Morale.' **L. Rougier.** 'Encore la dégradation de l'énergie; l'entropie s'accrôit-il?' [An attempt to support M. Selme's view that Clausius' theory that entropy tends to increase is mistaken. The author tries to refute Ostwald's proof of Clausius' theorem by using an analogous argument about water dropping from a height, and proving the absurd conclusion that its volume would continually increase. (The analogy breaks down, and with it the attack on Ostwald's proof, in the opinion of the present abstractor.)] **A. Rey.** 'Pour les Étudiants étrangers: a propos d'une licence de Français.' **J. Renauld.** 'L'Oeuvre inachevée de Mario Calderoni.' [Calderoni insisted that the possibility of truth or error only arises when we try to predict, and worked this theory out in detail. He discussed the arbitrary factors in science (very ably, to judge from M. Renauld's synopsis). He defined voluntary actions as those which are varied by beliefs as to their consequences, and argued that a belief in the external world depends on the fact that we can voluntarily vary many of our sensations, but that we have to make definite adjustments to do this. His own task lay in the direction of ethics and economics, and on the death of Vailati with whom he had collaborated, he turned his attention to these subjects. He drew extremely interesting analogies between marginal utility in economics and certain facts in ethics, and showed how this ethical marginal utility combined with general rules in ethics gives rise to a moral analogue to consumer's rent. (Calderoni's work must be well worth studying).] **G. Siméon.** 'Partisans de la force et partisans du droit.' [Shows by examples from con-

flicts about toleration, strikes, and wars that everyone in the end thinks that right may be defended by force and that force is only justified by right. Apparent differences on this point really are differences about what is right. Verbal agreement on this point covers wide differences. The sentiment of rights arises when I am forcibly resisted in doing what I think to be my duty. My recognition of the rights of others is only the recognition that they may be as sincere as I, or the desire to maintain a certain equilibrium by convention between them and me.] 'Nécrologie.' [Jules Lachelier (1834-1918).]

'SCIENTIA' (RIVISTA DI SCIENZA). Series ii. Vol. xxiv. July, 1918. **E. Terradas.** 'Le problème de la figure d'équilibre d'une masse fluide homogène en rotation. Ière Partie: Existence des figures d'équilibre.' **C. Viola.** 'L'analisi strutturale dei cristalli a mezzo delle radiazioni X.' **J. Arthur Thomson.** 'On sexual selection.' **S. Jankelevitch.** 'Les facteurs psychologiques de la révolution russe.' **Ph. Sagnac.** 'Le sens de la guerre mondiale.' Critical note. **G. R. Kaye.** 'L'origine de notre notation numérique.' [Some conclusions reached in articles by the author published in 1907, 1908, and 1911 agree with some of those reached by Carra de Vaux in *Scientia* for April, 1917 (*cf.* 'Philosophical Periodicals' in MIND for April, 1918). These conclusions, reached in wholly different ways by the two writers, are: (1) Proofs of an Indian origin of our notation are, to a great extent, legendary; (2) a confusion between the terms *hindi* (Indian) and *hindasi* (measure, geometrical, etc.) has helped to obscure the discussion; (3) the symbols do not arise from letters as has often been affirmed. As for de Vaux's theory of a secretion of the notation by the neo-Pythagoreans, and its transportation to Persia (and thence to India and Arabia, and its return from Arabia to the West), Kaye quotes from his pamphlet on *Indian Mathematics* (Simla and Calcutta, 1915, pp. 15, 45) that some mathematicians from the Schools of Athens emigrated to Persia in about 532 A.D. because they had heard that there was an ideal form of government under Chosroes I.; and that there are certain other facts which at least justify the hypothesis of the passage by Persia. As for de Vaux's psychological argument, Kaye also has tried to show the invention of our notation is quite foreign to the spirit of Indian culture. The usual idea of an Indian origin, apart from the misread reports of Moslem authors, is founded on such arguments as the use of the notation in very ancient inscriptions and the use of the abacus in ancient times in India. Kaye has shown in detail that both these arguments rest on fallacious grounds. There are other facts which witness against the Indian origin of our notation, as, for example, the different directions of writing in this notation and in Hindu script.] Book Reviews. General Review. **Giuseppe Stefanini.** 'Les progrès récents des études paléogéographiques. IIIème Partie: Études pétrographiques de M. Goldman et nouvelles études de M. Berry.' Review of Reviews. French translations of articles in Italian and English. Series ii. Vol. xxiv. August, 1918. **E. Strömgren.** 'L'origine des comètes.' **E. Terradas.** 'Le problème de la figure d'équilibre d'une masse fluide homogène en rotation. IIème Partie: Stabilité des figures d'équilibre.' **J. A. Lindsay.** 'Les dangers moraux de l'euthanasie.' **V. Giuffrida Ruggeri.** 'Le basi nazionali-etniche in Austria-Ungheria.' **A. Hopkinson.** 'The Blockade.' Book Reviews. Review of Reviews. Chronicle. French Translations of articles in Italian and English.

VIII.—CORRESPONDENCE.

To the Editor of "Mind".

Sir,

Prof. Burnet's review of Mr. P. E. More's *Platonism*, in your last issue, has called my attention to the charge brought against myself as well as Prof. Burnet on pages 11-12 of Mr. More's work. Mr. More, I find, says that we "make a mechanical division between the rationalistic and the mystical elements in the Platonic Dialogues and then relegate all the former to Plato himself and derive all the latter from Socrates'. Prof. Burnet has already replied to this charge as far as it concerns himself. For my own part I should be content to let it pass in silence were it not that some writers on philosophy have the unfair habit of treating every accusation which is not explicitly denied as admitted by its victim. This compels me to observe (1) that Mr. More offers no single shred of evidence for the charge, so far as it concerns me, and (2) that it is quite untrue. In *Varia Socratica* I have specified on page x of the Foreword as one of the historical characteristics of Socrates "the stress laid on the *μάθηματα* as a vehicle of spiritual purification". Pages 151-155 are taken up with an attempt to prove the familiarity of Socrates with mathematical science. Page 174 asserts that Socrates "stood from the first in very close relation with the last of his predecessors, the *φυσικοί*," that "he possessed mathematical attainments of an advanced kind," that he formed the centre of a group of men who "were at once students of mathematics and physics, and devotees of a private religion of an ascetic type". On page 266 I have written that Socrates was not merely the "continuator of the religious side of Pythagoreanism" but "its continuator on the more purely speculative side as a searcher after the 'real essences' and 'causes' of the world-order" and that he "was for all mankind the *προμνηστρία* of the *ἱερὸς γάμος* between genuine knowledge and true faith". These sentences, which I have taken almost at random from a work of 270 pages full of matter to the same effect, are enough to show that Mr. More has unconsciously produced a mere caricature of my statements. I feel driven to ask how an author who can in good faith so wholly pervert the plain meaning of a contemporary writing in his own language can be trusted for a moment as an interpreter of books written twenty-three centuries ago in Greek. It may be said that Mr. More has rightly given much more time to ascertaining the meaning of a very great man like Plato than he could be expected to waste on a small man like myself. I allow the reasonableness of the plea, but if he did not think it worth his while to read what I have written carefully enough to avoid such extraordinary misrepresentation, why did he drag my name into his book at all?

Yours, etc.,

A. E. Taylor.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—SENSE-KNOWLEDGE.[1]

By Professor James Ward.

It is characteristic of empirical philosophy, as we have seen, to start from analytical psychology and to talk first of all of sensations regarded, after the manner of the atoms of the physicist, as a manifold of particulars or psychical 'elements'. But no analysis can give a complete account of the whole that it more or less 'dissects'. Moreover, in this case the analysis is itself incomplete. The ultimate distinction in experience is that of the duality of subject and object, and this implies a certain continuity on both sides. The object as little as the subject is resolvable into a disconnected manifold. Throughout all experience there is something there of which the subject is aware, by which it is affected and with which it interacts. The knowledges with which we have now to deal are the knowledges that this objective continuity is said to 'give'.

But a knowledge for epistemology must be expressed in a proposition. We may therefore confine our attention to human statements, provided we can determine with sufficient precision just *how much* of what is stated concerns the object of sensory awareness or 'simple apprehension,' *as such*. This, however, is not altogether an easy matter, since the possibility of making these statements belongs to a standpoint above that to which the statements are to be referred.[2] "A consistent sensationalism must be speechless" T. H. Green

[1] This article is the third of a series of "Lecture Notes on Philosophy". The writer is hoping to publish others.

[2] On the difficulty of divesting them of the added implications that speech involves, *cf.* Meinong, *Ueber die Erfahrungsgrundlagen unseres Wissens*, 1906, pp. 23 f.

has said; and the remark is true and trite enough, if it means that infants and brutes neither abstract nor generalise. But it becomes questionable if we take it to mean that there is no knowledge till the sensory level of experience is passed, no knowledge save thought-knowledge. In that case it would seem that we must either (1) so extend the meaning of thought as to obliterate its essential characteristics or (2) fly in the face of facts, and set the continuity of experience at defiance.[1] There is, however, a third possibility. The contradictory disjunction, 'either . . . or'—valid in the region of abstracts, whence change and development are excluded—is often misleading, as we shall have frequently to notice, when not being but becoming is what concerns us. There may be a continuous progress from sense-knowledge to thought-knowledge, and yet the difference between sense and understanding—when at length the latter is fully developed—may be unmistakable; just as is the difference between the child and the mature man, though the one develops into the other without a break.

Existential Propositions.

§ 1. What now are the simplest statements that express only what is sensibly apprehended? They are among those variously named existential, impersonal or subjectless propositions, such as *pluit*, *es grünt*, *it gets dark*, and the like. Such statements, when not ignored by logicians altogether, as they usually—and perhaps rightly—were, have been the occasion of much fruitless controversy among them. This failure to achieve a definite decision is, however, very largely consequent on divergent views as to what is meant by logic. Generally it has been held that logic is concerned with 'thought as thought,' to use Hamilton's language, or—more precisely—with thought as a product rather than with thinking as a process. Its ultimate objects were said to be concepts (represented by terms). Terms as the elements of logical form—and so far regarded as 'given' to it—were said to be brought in judgments (expressed in propositions) into various relations. Of these, that called predication (S is P) was regarded as logically fundamental. Now it may fairly be affirmed that—despite many attempts—nobody so far has succeeded in expanding genuinely existential or impersonal propositions into the full predicational form; succeeded, that

[1] But for the study of animal behaviour and of the gradual unfolding of the infant mind, psychology would be more defective as regards 'origins' than it is. On the other hand, but for the prolonged ignoration of the historical method and the neglect of evolution, which lasted till the XIXth century, the plight of the epistemology of sense-knowledge would not be what at present it is.

is to say, in gaining general assent, and not merely in worsting their opponents. In a word the controversy has brought enlightenment rather than definite conviction, leading some to draw a sharper line between epistemology and logic and leading others to merge the two.

Anyhow, once allow that all knowledge is not thought-knowledge concerned with 'relations of ideas' in the phraseology of Locke and Hume—that, on the contrary, some knowledge is just the bare apprehension or awareness of 'matters of fact,' and there is no problem any more. Though sense is speechless, it is not 'senseless'; and we who have sense-knowledge as well as thought-knowledge can surely define knowledge without either denying the one or confounding the two. The characteristics of existential propositions and their epistemological import would doubtless have been recognised and appreciated long ago but for the logical bias that—until the collapse of scholasticism—diverted philosophy from empirical reality to 'dialectical' discussions. Thanks, however, to Hume and especially to Kant, the difference between existential and relational propositions—or thetic and synthetic propositions, as they have also been called—was at length seen to be radical. It will repay us now to consider this difference more in detail.

Whereas Locke still defined all knowledge as predicational—existence being what is predicated in existential propositions—Hume denied that existence is a distinct idea at all. This, no doubt, was going too far.[1] What Hume meant was that an existential proposition was not predicative, implied no 'agreement or disagreement of ideas,' nothing indeed, when sense alone is concerned, but bare awareness—*wahrnehmen*, as the Germans say—of a present 'matter of fact'. Kant in the *Critique of the Pure Reason*, though at one with Hume on the main issue and not improbably influenced by him, treated the question more generally. He took into account not only existential propositions for which immediate awareness sufficed, but also—and in fact chiefly—such as were mediated by inference, as *e.g.*, that God is, that there are atoms. The result was that the radical distinction which he had previously recognised between thetic and synthetic propositions, between A exists and A is B, was so seriously obscured that his commentators have failed to agree.[2] Of this distinction Kant, in fact, seems to have

[1] Though the simple apprehensions of the sensory level must come first, later reflexion may abstract from these the general 'idea of existence,' which each of them implies. To overlook facts of this order was a common failure of sensationalism. *Cf. Psychological Principles*, p. 86.

[2] Unlike Hume, Kant did recognise existence as a distinct concept, which as such, might be a predicate. He insisted, however, that it is

had an inkling even in his first metaphysical essay,[1] and in another written some eight years later he formulated it quite definitely: it is the distinction between absolute and relative 'position,' between cognising or being aware that A is and asserting—A being 'given' or 'postulated' or merely thought —that it is characterised or is to be defined or classed as B.[2]

never a *real* predicate. And here difficulties begin, for if 'exists' is not a real predicate must it not be a 'logical,' that is to say, a formal predicate? But again, since this would lead to absurdities such as making existential propositions analytical, must not 'exists' after all be a real predicate? "An accurate determination of the concept of existence might," Kant said, "put an end to this subtle (*grüblerische*) argumentation, were not the illusion of confusing a logical predicate with a real one so incorrigible" (*Critique*, A., p. 598; B., p. 626). Nevertheless such accurate determination would have sufficed, and Kant had it, so to say, under his thumb all the while, as is pointed out in the text above. Instead, however, of eliciting this definition from the facts before him, Kant proceeded further to confuse the issue by describing an existential proposition as after all synthetic, although it predicated no real *attribute* of the subject. But it was synthetic in a new and unique sense.

To follow Kant's exposition further we must bear in mind that he is dealing with cases where existence is *still* in question. The idea of existence is then presupposed and the existence of the object of inquiry is assumed to be at least possible; for obviously the self-contradictory cannot exist. What happens when at length I assert this existence? I do not, Kant replies, add existence to the object's other attributes: hence there is no real predication, as in the synthetic propositions hitherto recognised: "I only posit the subject by itself with all its attributes, and posit it, moreover, in connexion with my concept as its *object* (*setze ich . . . nur das Subject an sich selbst mit allen seinen Prädicaten, und zwar den Gegenstand in Beziehung auf meinen Bagriff*)"; or in plainer words perhaps, "the object synthetically fulfils or responds to my concept (*kommt zu meinem Begriffe synthetisch hinzu*)". But this is not very lucid after all. The one point which Kant has momentarily forgotten is that at the sensory level of experience this *synthesis* is impossible: we have then no preliminary idea of existence, nothing but the thesis or positing of the object which awareness involves. *Cf.* in Kant's *Critique of the Pure Reason* his discussion of the ontological argument, A., pp. 592 ff.; B., pp. 520 ff. As to the disagreement of his commentators, *cf.* A. Marty, "Ueber subjectlose Sätze, u.s.w.": *Vierteljahrsschr. f. wissentschaftl. Philos.*, Bd. XIX. (1895), pp. 19 ff.

[1] "Principorum primorum Cognitionis Metaphysicae Nova Dilucidatio," 1755, *Sämmtl. Werke*, Hartenstein's ed. (1867), i., propp. V. and VI., pp. 375 ff. *Cf.* Caird, *The Critical Philosophy of I. Kant* (1889), i., pp. 107 f., p. 111.

[2] *Beweisgrund der Dascin Gottes*, 1783, *Werke*, ii., p. 117.

It is regrettable that our English philosophical terminology has no precise equivalent for θέσις, *positio*, *Setzung*, familiar though we are with their technical use in other languages. We talk freely of hypotheses and suppositions but not so of theses or positions as epistemologically prior to them all. Aristotle attempted to prove that there must be such indemonstrable theses or beginnings of knowledge but made a point of maintaining that what is logically prior is not what is first known by us. For us knowledge begins with sense-particulars, and he describes, in language which psychology might accept to-day, the unbroken advance of experience from these primary data of sense to the thought-knowledge

And so, from the *existential* standpoint, Herbart and his distinguished follower, Drobisch, have represented the categorical proposition as only relative, or conditioned: its predicate pre-supposes but does not as such posit its subject. Similarly Mill maintained that a so-called 'real definition' postulated the existence of the thing defined.[1]

To object, as some have done, that this distinction makes all predication problematic or resolves categorical propositions into hypotheticals is only to misunderstand it. A relation always pre-supposes some *fundamentum relationis;* but whereas this may be 'given,' that must be either discerned or inferred or assumed. Neither inherence, or the categorical relation of subject and predicate, nor dependence, or the hypothetical relation of antecedent or consequent, is immediately 'given'. For us a datum, what is 'given,' is ultimately just some 'matter of fact'; and in so far and for so long as such data are all, there is nothing to determine the forms that may be made out of them or the structures that may be based upon them. These may fall within the domain of logic or thought; whereas those are and always remain within what we regard as the distinct and independent domain of being or things. But nobody, it may be urged, can suppose that there is no connexion whatever between these domains. This possible remark seems to call for some further elucidation of the sense in which the distinction in question is radical.

The mention of formative processes and resulting structures has brought us back to the duality of subject and object.[2] And here certainly we have a relation and one too that is, for us at all events, primordial. This duality is, however, a relation dividing the one world of *being* into two correlated or complementary halves. So far it does little to discriminate between the world of being and the world of *ideas*, between existential and logical propositions; for only the former are in any sense explicit at this stage. All that such propositions would state, if they could then be expressed, would be the reception or apprehension of what is 'given' or 'there' or ob-jected, *das Gegen-ständliche* or *Vor-gefundene*, as the Germans say. But the metaphors with which we attempt to describe what is too mysterious—or perhaps too simple and ultimate—for description, are apt to mislead. In

which embraces universal truths. He only did not call them absolute positions: that he left to Kant.

[1] *Cf.* Herbart, *Lehrbuch der Philosophie*, 5te Auf. (1850), pp. 92 f.; Drobisch, *Neue Darstellung der Logik*, 4te Auf. (1875), pp. 61 f.; J. S. Mill, *A System of Logic*, I., viii., § 5.

[2] For we hold that it is the subject that 'synthesizes' the 'data,' which, as we say, it has first merely received—its so-called 'sense-data'.

the first place, there is no spatial relation in the case. Again, all that we can be said to 'receive' from the object or that the object can be said to 'give' us, is not what it 'presents'—for this is what it *is*—but the feeling that it occasions. Leaving metaphors aside, there is, however, one difference clear: the relation is not symmetrical. The object's presence determines the subject's activity. The subjective interest which this activity implies has no objective counterpart; but on this the whole development of experience entirely depends. Such development is the psychologist's business, not ours. Suffice it to say that we come ere long to comprehend 'objects of a higher order' that are not *data* for sense but the *producta* of thought widely understood.[1] But this interested activity may fairly be called creative, provided we recognise that what it creates are not *posita* but *superposita*—if the term may be allowed—founded on but not found among bare *posita*.[2] Herein lies what is radical in the distinction of sense-knowledge and thought-knowledge.

Impersonal Propositions.

§ 2. The existential ground proposition It *is*—if we may call it so—which sense-knowledge implies becomes an impersonal proposition, as soon as the bare 'It *is*' has become definite, as in 'It *rains*' or 'It *blows*'. The subject, if subject it may be called, is expressed by the neuter pronoun used as an indefinite nominative. What does this It mean? Very often some definite object is indicated or 'understood,' as when we ask What is that? In such cases, as the answers shew, we are not dealing with a genuine impersonal. But there is a clear difference, as we shall presently see, between the level of experience to which impersonal propositions go back and the level at which propositions with 'this' or 'that' as subject arise, so-called 'demonstrative,' 'deictic' or 'indicative' (Ger. *hinweisende*) propositions. When we say 'It rains' or 'It blows,' the obvious meaning is not 'Rain is' or 'Wind is'. *The 'It' there seems to refer not to a definite something, now this now that, but rather to the environment*

[1] And activity being determined by interest such *producta* are also *praeposita* in the Stoic sense, are due, that is to say, to what may be called 'subjective selection'. If it be allowable to disregard the context we might here adapt the words of Cicero: "In vita non ea quae primario loco sunt, sed ea, quae secundum locum obtinent, *προηγμένα* id est producta nominantur" (*de Finibus*, iii., 16). *Cf. Psychological Principles*, pp. 50, 312, 415 *n.*

[2] *Cf.* Lotze's *Metaphysics*, Eng. trans., bk. III., ch. iii., "On the Mental Act of 'Relation'" (*Von dem beziehenden Vorstellen*). The whole chapter is especially important as bearing on our present topic.

as a whole, within which the change we become aware of occurs.

Now the concept of change pre-supposes some idea of a thing that changes as well as some idea of a cause of the change—either the thing itself or another. But whereas the *apprehension* of change is essential to any experience at all, the conception of change is another and much later attainment. Many, who seem on the whole to accept this interpretation of the impersonal propositions implied in sensory experience, have entangled themselves in needless difficulties and obscured the issue by overlooking this difference.[1] They seem guilty, in fact, of what has been called the psychologist's fallacy. Perhaps it would be fairer to say that all they mean is that whatever is logically implicated is unconsciously involved.[2] But surely this is bad psychology and assumes a scientifically unwarranted and unworkable use of the notion of potentiality.

The difficulty, as we have already said, lies in the gap between sense-knowledge and thought-knowledge which exists for our exposition, though it is really no gap at all. *State* an item of sense-knowledge and you have done too much—inasmuch as you have transcended it; leave it *unstated* and you want more before you can do anything. To meet this difficulty we have two resources: we might call the one internal or even subjective—provided that term is not misunderstood—and the other we might then call external or objective. In the former, 'working from within' we can historically *retrace* the development of experience, both individual and racial, towards its beginning.[3] In the latter we can interpret animal behaviour on the analogy of what we have previously more or less completely verified in our own.

In the first our inquiries end in the twilight of primitive language and child-speech. Only the latter of these admits of any observation. And even here there are difficulties, since for the most part children learn by imitation: the language they acquire is their mother-tongue and

[1] B. Erdmann, for example, who deals with these propositions under the heading of causal judgments (*Logik*, i., 1892, pp. 304 ff.). But what Erdmann emphasizes is their *logical* implications, not—so to say—their *psychological* content (p. 307). What he fails to see, however, is that this psychological content is itself a judgment and is certainly not explicitly a causal judgment. The problem is to determine as precisely as we can the import of this 'psychological judgment,' as Mansel actually called it: As regards this, Erdmann's exposition seems to be a complete *ignoratio elenchi*. *Cf.* A. Marty, *op. cit.*, xviii., pp. 432 ff.

[2] *Cf.* Erdmann, *op. cit.*, p. 309 *fin.*

[3] Albeit, as just said, no individual amongst us can *recollect* it.

their spontaneous speech-making does not survive long enough to show what might eventually come of it. Still enough seems known to justify its identification with what is conjectured to have been the earliest form of human speech. Though usually monosyllabic, this is always a sentence, a one-word sentence (*Einwortsatz*, as some German writers say)[1] like the cry Fire! or the command Halt! It is holophrastic speech: distinct parts of speech and syntax are a later development. The primordial duality of experience comes out in it, but any further differentiation is minimal. What is expressed is at once subjective attitude and objective situation—*Selbststellung* and *Vorstellung*, as Münsterberg felicitiously describes it.[2] Epistemology is only concerned with the latter.[3] What then, it inquires, do we find to be primarily significant in the objective situation?

Turning now to the behaviour of animals we get at once a satisfactory answer to this question: it is some interesting surprise, some change within the environment as a whole, that leads both to the emotional manifestation and to some more or less purposive reaction. When *we* say It rains or It blows, the lower animals may, as we do, seek shelter or avoid exposure. But they at least know nothing of Zeus or Boreas, whom some imagine must be meant by 'It'. Especially will sudden movements attract attention and awaken expectation, of danger it may be, or perhaps of prey.[4] "It is dangerous," or "It is promising," is how we should sum up such situations, and readiness to flee or to seize would be the subjective attitude assumed. With this the behaviour of dumb animals entirely corresponds. And so, *mutatis mutandis*, of other 'striking' changes of situation. Generally, subjective change in presence of objective change is the least that an experience can imply and what therefore it ultimately means, as we began by supposing. We may, then, now conclude that objective changes are what impersonal propositions always assert.

But how are we to account for this 'It' with which in modern languages genuinely impersonal sentences begin, and to what precisely does this It refer? This seemingly simple

[1] *Cf.* C. and W. Stern, *Die Kindersprache*, 1907, p. 165.

[2] *Gründzüge der Physchology*, i. (1900), p. 50.

[3] For psychology, however, the connexion of the two is the starting point in exploring the origin of language. Here the emotional expression which discloses the subjective attitude comes first and the problem is to trace the steps by which it gradually acquires objective significance. *Cf. Psychological Principles*, pp. 287 ff.

[4] *Cf.* C. H. Schneider's interesting article, *Zeitschr. f. wissentl., Philos.*, iv. (1878), pp. 377 ff.

question has perplexed philologists and even logicians—those of them at least who have attempted to deal with it. And yet, without reaching any explanation that can be called satisfactory as regards its psychological genesis they accept in the main the interpretation here adopted.[1] We need, however, only to recall the psychological distinction between field and focus of consciousness and most of the mystery besetting the 'It' is dispelled. The objective changes that non-voluntarily divert our attention and so lead to a correlative change in our subjective attitude, are never the whole of which we are aware: beyond them, the 'restricted focus of consciousness,' there extends always this 'indefinite field' or presentational continuum. It is obvious, indeed, that change implies some continuity, or that, as Kant paradoxically put it, only the permanent can change; and the field is the permanent, the foci the variable.[2]

The mention of continuity once again brings us back to the duality of subject and object; and here again it may be said that some mystery lies. But is there really anything mysterious? At any rate, it may be urged, if there is not, then our knowledge of these factors, subject and object, can be accounted for: granted that we know what we call their changes, how, then, do we know them? We may reply that we know them, or come to know them, through the continuity of their respective changes; and though this is confessedly not the last word on the whole question, it is the

[1] Prantl, for example, says: "Such impersonal propositions one must, in fact, regard as earlier forms (*Vorstufen*) of the completer judgments in which subject and predicate are clearly distinguished (*eine geschiedene Existenz haben*). . . . We ought therefore not to raise the question what that 'It' may be. . . . But if we must at any cost have an answer, the only reasonable one seems to be that the indeterminate universality (*Allgemeinheit*) of the perceivable world is the subject of all these propositions" (*Reformgedanken zur Logik*, Ber. der Münch. Acad. Phil.-hist. Cl. 2, 1875, p. 187). Again, quoting T. S. Vater (*Lehrbuch der allegemeinen Grammatik*, 1895, p. 120), A. Marty remarks: "One frequently hears it maintained by grammarians that our 'It' or its equivalent signifies something that can be merely indicated (*nur Andeutbares*), something, unknown or mysterious". Similarly Steinthal (*Zeitschr. f. Völkerpsych. und Sprachwissen*, iv., 1866, p. 141): "The impersonal indicates an action as such, the subject of which as mysterious or unknown is merely indicated. Language cannot do else—even in such cases—than assign (*setzen*) a subject for the action; but here it posits (*setzt*) one that we cannot think or should not try to think (*nicht denken soll*)." And again Bergmann (*Reine Logik*, 1879, p. 33) speaks of impersonal propositions as "existential judgments . . . but as at the same time involving the attempt (*der Versuch*) to think the world as the subject and the existing thing as a modification of it". *Cf.* especially Lotze's *Logik*, 1874, § 49.

[2] *Critique*, A., p. 187; B., p. 230 *fin.*

only answer we can make at this stage, and it is perhaps sufficient for the present. But it brings out another ultimate fact—or mystery, as some may prefer to call it. That is the plasticity—by which we mean the progressive differentiation, the retentiveness and the assimilation—characteristic of the development of experience as a whole. When as psychologists we talk of a presentational continuum or psychoplasm,[1] those 'general characteristics' or 'fundamental processes' are the *ratio cognoscendi* of it; while it is the *ratio essendi* of them. It is useless to call one a fact, the other a mystery; for they are both really the same.

Returning once more to the 'It' of impersonal propositions, we may at length conclude that as regards sense-knowledge this It implies nothing more than that continuum. It does not refer to a definite individual such as a deity nor to a rounded and complete whole such as the world. It is not Herbert Spencer's Unknowable—though like it in being 'a necessary datum of consciousness'. What we specially attend to from moment to moment is always but a part of this continuum, is inseparable from it, and afterwards retained within it. In calling these propositions of sense-knowledge 'existential' what we emphasize is the definite 'position' or thesis which they express: in calling them 'impersonal' what we emphasize is their logical incompleteness, their lack of definite synthesis. Genetically, they are inchoate judgments, essential to, but not sufficient for, thought-knowledge. Hence the perplexities we have noticed of those who attempted to deal with them as they are now expressed in language, without deigning to inquire how they came to be. Schleiermacher and Trendelenburg alone seem to have taken their origin into account. As the latter tersely puts it, "we think in predicates"—a pregnant saying which throws light on one stone of stumbling in this controversy, *viz.*, the use of the term 'subjectless propositions'[2]—propositions, that is to say, only implying the objective continuum which always confronts the experient and explicitly referring only to such of its changes as interest the experient by furthering or hindering his welfare.

Affectivity and activity make up 'the irreducible minimum' of experience on the subjective side and by interaction with the objective side experience becomes a complete whole. Sensory and motor presentations are those which we know

[1] *Cf. Psychological Principles*, ch. ii., § 1, pp. 30 f.; ch. iv., § 2, pp. 75 f.; ch. xvii., § 2, p. 412.

[2] *Cf.* Trendelenburg, *Logische Untersuchungen*, 2te Auf. (1882), ii., pp. 208 ff.

first. The latter, as voluntarily determined, we come afterwards to attribute to self; and the former, as non-voluntarily determined, to a not-self. Then the actions are explicitly 'predicates,' have, that is to say, a definite subject: at first they were only implicitly such. In complete accord with this is the grammatical form of impersonal propositions; they are invariably verbs. Slightly amending a sentence of Trendelenburg's we may say: action, "as we still see in impersonal sentences, can be apprehended by itself: but the thing that acts, only through its action. Hence the beginning of speech will lie in verbs, but in such a form that they of themselves constitute a judgment, or rather, the rudiment of a judgment underlying the development of predicates and subjects alike".[1]

Demonstrative Propositions.

§ 3. A great advance is made when such inchoate propositions—positing a 'matter of fact' but indicating no definite subject—lead on, thanks to the plasticity of the continuum, to propositions which do both; when, that is to say, from impersonal propositions with no subject but the continuum, we pass to the demonstrative propositions in which the subject This or That is not merely objective but is itself a definite object. It would be out of place here to describe in detail the perceptive process by which this restriction is carried so far that we can say, This is red or This is bitter or even This is blood or This is gall—carried so far that nouns, adjectival or substantival, come upon the scene. When, however, that is the case, we can proceed to discriminate between This and That: This is red, that is white; or This is blood, that is snow; or again This is bitter, that is sweet, or This is gall, that is honey.

In beginning the exposition of these more advanced knowledges with human statements, statements, that is to say, made at the higher level of thought-knowledge, we have again to remember that such knowledges are possible without thought and without speech.[2] To understand this advance we must regard such knowledges from the standpoint of the lower knowledges which they presuppose, not from that of the higher to which they lead. The advance, as already remarked, lies in the fact that these propositions are no longer strictly impersonal. And yet they have a certain continuity with impersonal propositions; but whereas those refer to the one universal It, these refer to many, which are

[1] *Op. cit.*, pp. 213-215. [2] *Cf.* above, p. 257 *fin.*

differentiated within that one and so can be distinguished from each other. These many particular Its, however—this, the it here by me (*hoc*) and that, the it there by you or by him (*istud or illud*)—not only differ from each other as subjects in respect of the relations between 'here' and 'there,' etc.—to which we shall return later—but their predicates also differ in another respect to which we may turn at once.

The predicate when expressed in language may be either an adjective or a substantive; and this difference in the end is vast. But which is first? This is a nice question and largely a psychological one. Psychologically it is probably true to say the adjectival is prior to the substantival, for sense-data or simple percepts seem clearly to precede the complexes of these that we may call intuitions of things (German *Auschauungen*).[1] And epistemologically we may say—*cum grano salis*—that in proportion as the adjectival form predominates the judgment lacks the characteristic of the demonstrative and approximates to a purely impersonal one. This is in keeping with what comparative psychology teaches concerning the development of perception, as we proceed from lower to higher forms of life.

Our human perception, or intuition, of things as expressed in language is, of course, for us the nearest, the highest and the clearest. Unfortunately, in consequence of failure to appreciate the historical method or to respect the principle of continuity, epistemology has not merely started from the human level—as it must; but it has tended to assume that this intellectual level is where knowledge itself begins.[2] It has also ignored the fact—the significance of which language tends to conceal—that demonstrative propositions range between two extremes. At the lower extreme are the adjectival demonstratives with predicates answering to simple percepts or 'sense-data'. They presuppose propositions of the strictly impersonal form, from which they have gradually been *differentiated: e.g.*, This (it) is red. At the upper extreme are the substantival demonstratives with predicates answering to complex percepts or intuitions of a thing. They presuppose demonstratives of the adjectival form which have been gradually *integrated*: *e.g.*, This (thing) is a rose.[3] Demonstrative propositions at this upper extreme are continuous with the

[1] *Cf.* Eisler, *Wörterbuch der philos. Begriffe*, 2te Auf., p. 41.

[2] Even Sigwart has involved himself in some difficulty here in connecting impersonal judgments with what he calls *Benennungsurtheile* (*cf.* A. Marty in the article already referred to, Bd. xviii., pp. 327 ff.).

[3] *Cf.* on the mutual relation of concept and judgment, *Psychological Principles*, pp. 305 ff.

typical categorical propositions of logic in which both subject and predicate are concepts or terms, as in This flower is a rose. But now for logic concepts or terms are what is 'given,' and its first concern is to analyse them with a view to their definition. Of this process Leibniz gave very early what we may regard as a complete account: "Analysis haec est: datus quicunque terminus resolvatur in partes formales, seu ponatur ejus definitio: partes autem hae iterum in partes, seu terminorum definitionis definitio, usque ad partes simplices, seu terminos indefinibiles".[1]

To these indefinables or 'simple, not farther analysable elements,' as Sigwart calls them, belong the adjectival predicates of the first form of demonstrative proposition, the primary presentations, that is to say, which in the course of our perceptual experience have been gradually synthesized so that we reach at last demonstrative propositions of the second form. But if we now imagine logical analysis to have completed its work we should find ourselves confronted by a bewildering aggregate—a chaos, we might fairly call it—of isolated elements.[2] Such an experience there has never been. Yet a situation of that sort is often imagined as that from which experience starts. Many psychologists and epistemologists have, in fact—overstraining the much abused metaphor of matter and form[3]—regarded sense-data as nothing more than the disconnected 'manifold' that would be reached by a thoroughgoing logical analysis of the concepts which experience only acquires at the intellectual level. What the psychologists overlook is the gradual differentiation of the presentational continuum and the fact that integration and adaptation—which imply meaning—keep pace with this. What the epistemologists overlook is that such perceptual synthesis or integration must precede the logical analysis which they afterwards perform.

We are here brought up against a new problem in which

[1] "De Arte combinatoria," *Leibnitii Opera philosophica omnia*, Erdmann's ed., 1840, p. 23. But it was Descartes who had the signal merit of making thoroughgoing analysis the foundation of scientific method to the great detriment of the 'historical method'. *Cf.* his *Discourse on Method* and the two posthumous fragments supposed to have been written in connexion with it.

Cf. also Drobisch, *Logik*, p. 17; Sigwart, *Logik*, 2te Auf., 1889, i., § 41, p. 328 f. Sigwart here compares sense-data to the letters of the alphabet: they can only be named but not explained. Hegel had compared them to atoms (*Encycl.*, § 20).

[2] Schleiermacher actually speaks of intellect as confronted only by 'a chaotic manifold of impressions,' *Dialektik*, § 108, quoted by Vaihinger.

[3] This is notoriously the case by Kant. *Cf.* on this Vaihinger's elaborate *Commentar z. Kant's Kritik*, Bd. II. (1892), pp. 58 ff.

sense-knowledge is regarded primarily from what we may call the objective side. To deal with this problem now will entail a brief digression. It will be best to begin *de novo*, even at the risk of some repetition; for if the question here raised can be satisfactorily solved, its solution will facilitate the consideration of the larger question previously raised; *viz.*, that concerning the dualism of sense-knowledge and thought-knowledge which rationalism has tended to maintain when it has recognised sense-knowledge at all.[1]

Sense-data.

§ 4. At the outset it may be well to clear away an obscurity in our current terminology that has led to much confusion. The terms sensation and sense-datum are commonly used as synonyms. Sensation, however, as a psychological term—and one that it might be well to avoid—implies a process involving both subject and object alike. It is, however, only to the objective factor in this process that the term sense-datum applies. This difference comes out when, as often for convenience and yet incorrectly, we speak, for example, of a sensation *of* red or *of* bitter. Red and bitter correspond to what is objective in the sensory process, and the inaccuracy lies in confusing this part with the whole. This objective part is the sense-datum. Epistemology then, which is concerned with knowledge not with processes of knowing, has here no direct concern with sensation but only with sense-data. Hence the question now before us is: Are sense-data objects of knowledge? If they are, the continuity between sensibility and understanding, which Kant thought to be possible though it was unknown to us, will become at any rate clearer.

Nevertheless, we shall find, if we have not already found, that we cannot ignore the development of experience as a process save at the risk of prejudging this question. Starting, as logical analysis does, with discrete constructions, for that is what concepts are, then at the end, supposing the end attained, there will be no 'form' or structure left, but only 'matter'—which has no form. If, as Leibniz supposed, there is no end, still for us the final residuum is confused and that is tantamount to its being but matter for us. We may confidently trace the still prevalent assumption that sense-data are but the *material* of knowledge, rather than its rudimentary beginning, to the too exclusive reliance on logical analysis on the part of the rationalistic thinkers of

[1] In Lecture II.

the continent, which has so prejudicially biassed psychology. The sensationalism or psychological atomism that still lingers on is partly due to this. Descartes was here followed by Locke, and Locke by Hume and Kant.[1] But this rationalistic procedure is here fundamentally defective just because it starts from thoughts and not from things, therein perpetuating the false method of the ancients already referred to.[2]

What we want is not logical but real analysis: and for that we have to look to psychology. But it must be a psychology that starts from experience as a continuous process, for which therefore not structure but function is the primary fact. But now in continuous process what is once found essential must be essential always. If the mutual interaction (Kant's *dynamische Gemeinschaft*) of subject and object be the form of experience, then, in no experience, however primitive, can this interaction be lacking. Further, in such a continuous process, whatever are the essential characteristics of its two factors must likewise persist. If this be true, then the term 'matter' can never be appropriate to the object of experience, if by matter is meant the utterly indeterminate and formless; nor the term 'atom' if that is to imply absolute discontinuity.[3] Mere being devoid of determination of any

[1] *Cf.* Locke, *Essay* I., i., "Though the qualities that affect our senses are, in the things themselves, so united and blended that there is no separation, no distance between them: yet it is plain the ideas they produce in the mind enter by the senses simple and unmixed". In § 2, as elsewhere, he calls these simple ideas 'the materials of all our knowledge'. Both positions his later expositions implicitly contradict—especially, his treatment of the idea of existence, which is particularly relevant to the question before us. As to Hume, *cf.* his *Treatise*, Green and Grose's ed.: "There are not any two impressions that are perfectly inseparable," i., p. 319; "Every perception is distinguishable from another and may be considered as separately existent," p. 495. The fact that Locke began his *Essay* with a polemic against Descartes has long tended to obscure how greatly he was influenced by the Cartesian philosophy. The very method that led Descartes first of all, *more geometrico*, to distinguish and divide to the uttermost, led Locke—notwithstanding his professed intention of following a 'historical, plain method'—to begin by analyzing the entire furniture of our minds into simple separable ideas. The atomic sensationalism of our English psychology is thus after all largely due to the influence of that rationalism which epistemologically is the polar opposite of all that is empirical. *Cf.* note 1, p. 269; also Prof. Norman Smith's *Studies in the Cartesian Philosophy*, 1902, pp. 181 ff., 248 ff., 260 f.

[2] In Lecture I.

[3] What then about 'matters of fact,' it may be impatiently retorted: are not sense-data matters of fact? And what about the absolute theses or positions that are prior to syntheses or logical propositions? What form have they? This is a possible but superficial quibble suggested by the terminology in use and silenced by its meaning. Matter of fact means what is actual (Ger. *Thatsache*) and positing is the immediate cognisance of such actual existence (Ger. *Dasein*). Both imply some present

sort may make the beginning for pure thought—as with Hegel; and mere matter as pure potentiality, *i.e.*, as devoid of any actual determination, may be the presupposition of form—as with Aristotle; but concepts of this order plainly transcend experience as actual process. There 'It is' as little suffices to express the objective situation as 'I am' to express the subjective attitude. It is equally plain that a manifold of discontinuous presentations could never yield the sort of continuity that we find in experience. The failure of the Associationist psychology, which is based on that assumption, is evidence of this.[1] There is, of course, room enough for the employment of the metaphor of matter and form in describing experience: it is applicable in a relative sense wherever we find synthesis; all objects of a lower order are matter that is formed into objects of a higher order. But sense-data, which we may regard as in this respect matter of the lowest order, still have form. This we may proceed to see.

In the first place, a sense-datum is primarily experienced as a change. Its apprehension is an event in the course of the experient's life; it is impressive because it is interesting, and so along with the apprehension there goes always implicit appreciation.[2] Thus at any given moment what an experient is aware of is some situation to which it strives to adapt: to describe such a situation as formless is therefore surely a misnomer, for obviously a change cannot be indefinite, least of all when it entails interaction—an adjustment of changes, that is to say. Moreover, if we regard experience as a continuous process, there is never a time while it lasts, when the subject is confronted either by a bewildering *embarras des richesses* or by an overwhelming sea of troubles, such that any subjective selection is impossible. If at the outset we were pelted by an aggregate of disconnected presentations such as Kant imagined, no matter what forms of intuition or of thought might 'lie ready in the mind,' all would be unavailing. In point of fact, however, the range of a given subject's experience only advances *pari passu* with its assimilation and integration of previous differentiations of its continous objective environment. Surely then the sense-data of which it is aware—and no others count—are severally knowledges, and collectively constitute its objective experience; for how else could this experience advance?[3] True,

determination within experience: the one term referring to its being there, the other to the subject's consciousness of it.

[1] *Cf. Psychological Principles*, pp. 75 f., 192 f., p. 412.

[2] *Ibid.*, pp. 387 f. [3] *Ibid.*, p. 143 *fin.*, p. 411 init., p. 414 f.

these sense-data are indefinables for logic; but unless they were from the first determinate for experience, they would never become recognisable, perceptible. But inasmuch as this is what happens whenever they are interesting, they must have form: we cannot regard them either as pure matter or as absolutely atomic—concepts altogether incompatible with experience.

In the second place, when we have advanced to the thought level, we find on comparing our sense-data that—though severally indefinable—they nevertheless have characteristics. And these characteristics, though really inseparable, are still distinguishable, yielding, in fact, certain categories of which they are the prime source, *viz.*, intensity, quality, extensity and protensity. Thought discerns these characteristics but it does not constitute them: they are always there, and determine the subject's reaction.[1] Surely here again then we have evidence that sense-data are objects of knowledge.

These 'categories of sensation,' as v. Hartmann expressly called them,[2] were also, in fact, recognised as such by Kant, though forced almost beyond recognition into the Procrustean bed of what he was pleased to describe as 'the architectonic of pure[3] reason'. In conformity with his 'schematized categories' he formulated certain principles which were to determine the application of these to experience.[4] The second group of these principles, concerned with the categories of *quality*, he called 'Anticipations of Perception'. In place of three such 'anticipations'—answering to the three categories of quality—he gives, however, but one, and in that, as formulated in the *Critique* itself, he refers only to the intensity which every real sensation must possess. In the *Prolegomena* (§ 24), however, 'intrinsic quality' (*eigentliche Qualität*) is also mentioned as if admitting of anticipation. Again, among certain manuscript annotations, referred by their editor to the period when the critical philosophy was in process of incubation, there is a note to the effect that "in all knowledges the object has both matter and form, that is to say quality".[5] And, finally, in his exposition of the schemata—in an otherwise very obscure passage—he connects intensity

[1] *Cf. Psychological Principles*, pp. 247 f., 254.

[2] *Cf.* his *Kategorienlehre*, 1896: Die Kategorein. der Empfindung, pp. 1-104.

[3] *Critique*, A., p. 832; B., p. 860. *Cf.* on this an important little book by E. Adickes, *Kant's Systematik*, u.s.w. 1887, and especially in connexion with the present context, pp. 49 ff.

[4] *Critique*, A., pp. 158 ff.; B., pp. 197 ff.

[5] *Reflexionem Kants zur Kritik der reinen Vernunft*, edited by B. Erdmann, 1884, p. 173.

with the transcendental *matter* of all objects as things *per se*: this constitutes their reality (*Sachheit*).[1] The long and short of all this seems to be the admission of intensity and quality as sensory categories.[2] The first group of principles pertains to the categories of *quantity* and is entitled 'Axioms of Intuition'. Here again but one axiom is announced in place of three, and that one refers to space and time as *quanta*. Its purport is that "all objects of experience are intuited as spatial and temporal magnitudes": this may be a fact, but it is no axiom. Its intention was to 'make pure mathematics in their full precision'—though independent of objects of experience —'still applicable' to them. And that may be true, but only provided that extensity and protensity are of themselves original characteristics of sense-data: otherwise what basis for 'application' is there? Kant's two stems of knowledge here come inconveniently to the fore. "It is the mistake of a falsely guided reason," he urged, "to imagine that one can separate the objects of the senses from the formal conditions of our sensibility"—which he himself assumed to be independent of them. The converse mistake is the real one, and of that he was guilty himself when he began by separating extensity and protensity from sensations, or rather by losing sight of them altogether, basing his *Critique* on an impossible dualism of pure form and pure matter. A more thorough psychological analysis at the outset would have saved him from that mistake; as it is, in these so-called axioms of intuition he unconsciously testifies to a truth he had failed to see before.[3] Thus imbedded within the formal structure of Kant's system we find *sensory* categories: what changes they may necessitate in it, when they are fairly unearthed, remains to be seen. Meanwhile we note that they are (1) intrinsic quality and (2) quantitative continuity, as (*a*) extensive, (*b*) protensive, and (*c*) intensive, or real, *i.e.*, the matter that answers to quality as the differentiating form.

[1] *Critique*, A., p. 143; B., p. 182.

[2] In his table of categories, it will be remembered, quality refers to the so-called logical quality of judgment (as being affirmative, negative, or 'limitative'). *À propos* of this Professor Riehl pertinently remarks: "It is utterly unintelligible what the so-called quality of a judgment has to do with sensation" (*Der philosophische Kritizismus*, 2nd ed., i. (1908), p. 542 *fin.*) Here we have one more proof that Kant could not really escape the recognition of sensory categories.

[3] *Cf. Psychological Principles*, etc., ch. v., § 2., pp. 105-107. *Cf.* also Stumpf, *Ursprung der Raumvorstellung*, 1873, pp. 10 ff., a work which I ought to have mentioned in writing my *P.P.* Stumpf's '*psychologische Theile*' correspond to what are there referred to as 'characteristics of sensations'.

(*To be continued.*)

II.—BERGSON AND ABSOLUTE IDEALISM (II.).

(*Continued from p.* 53, *Jan.* MIND.)

BY S. RADHAKRISHNAN.

III. MECHANISM AND TELEOLOGY.

WHILE the absolutist holds to a teleological conception of the universe, rejecting mechanism, Bergson rejects both. But to make his system consistent and satisfactory, Bergson is obliged to admit teleology. To Bergson, reality is creative evolution. It is spontaneous creative process. Time is the very substance of reality. Mechanism and teleology both reduce time to an empty appearance, and rob the universe of everything in it which is unique and novel. The universe is determined by a first cause—according to mechanism, by a final cause—according to teleology. Mechanism regards "the future and the past as calculable functions of the present," and claims that all is given (*C.E.*, p. 40). The world of nature becomes a machine in which there is no room for the novel, the unique and the individual. If we cannot grasp the whole universe in one comprehensive vision, it is due to our mental impotence. Nor do we fare better with teleology which conceives the world as the realisation of an absolute purpose. When the world is the working out of a prearranged plan, the cosmic process is non-creative. The world is committed to an externally imposed programme. Real time and duration become futile. The end is inevitable. There is no risk, no failure, no uncertainty. But to Bergson nothing is inevitable. Everything is in the making. Time is supremely significant and real. Both mechanism and teleology go against the central conceptions of his philosophy. To both everything is given ready made from the first. Only teleology substitutes the pull of the future for the push of the past. It is inverted mechanism. Whether the individual is the result of the interaction of atoms or only a passing thought of God there is no place for the individual with his freedom and individuality.

But is Bergson's account of the nature of creative evolution correct? Is it an incessant flow without any plan or

purpose? Does it not reveal a tendency or a fulfilment of end or aim? Are we to think that this process of eternal change follows no ends and pursues no purposes? In his anti-absolutistic bias, he regards the absolute as an eternal immutability rendering all agitation and disquiet illusory. And so Bergson starts with his conception of reality as a Becoming, but this leaves no room for rest and stability. Perpetual flux is the real. Bergson's cosmic principle seems to be the mirror of the twentieth century soul who lives in an atmosphere of constant hustle and excitement, in a perennial maelstrom of events. The world becomes unintelligible caprice as the creative principle is looked upon as obeying no laws, and fulfilling no ends. In short absolute chaos would prevail, in which nothing rational could be undertaken. Chaos is God. In a world of such absolute caprice, man will have to shut his shop and descend into dust at the earliest opportunity. It is impossible that Bergson should mean all that he says when he is emphasising the absence of teleology. It cannot be that he is satisfied with a world without rhyme or reason.

If the world is only a series of disconnected states, we cannot be sure that the world is progressing at all. How can we be sure that the changes are all in the right direction? Unless we have a whole which is present throughout the universe, we cannot have any guarantee of progress. In its absence, the world would be mere caprice, purposeless growth. Then what appears to us would be the ultimate reality. If the world with its horror and imperfection were the sole reality, if there were not in it a stable spiritual purpose which is working for the values and the ideals of man, then we shall be compelled to view the universe as a great tragedy indeed. If faith in the whole, faith in the possibility of harmony in the world is absent, what is there to inspire effort? Bergson will not hold to any such conception of an irrational *durée*, for "an absolutely irrational *durée* might suddenly stop creating, explode, go into nothing and refuse to come back; its creations might be like the frenzies of a madman".[1] Bergson does not hold to any such conception. As much as any absolutist, he holds to a conception of an identity in difference, a whole in the world. Even with him all is given. Bergson's creative principle does not create without nothing. It contains an infinite number of possibilities. It is an "immensity of potentiality" (*C.E.*, p. 272). Bergson is not right in thinking that nothing is given. The creative principle, like the Leibnitzan monad is self-sufficient

[1] Frank Thilly in the *Philosophical Review*, vol. xxii., p. 127.

and has all the potencies in it. Bergson does not hold to the idea of a growth out of nothing or void. The "organised world is a harmonious whole" (p. 53). The whole is an organic development where every stage is the sum of its preceding stages. There is enough of law and regularity in the working of the creative principle. The items of the creative evolution obey order and are not irrational. The *elan vital* battles with matter and overcomes it. Though Bergson does not admit the conception of a fixed goal towards which the process of evolution is tending, he still holds to the reality of a conscious tendency. Bergson does not say that the flux of the world is the whole. He postulates a God who is "the source whence issue successively, by an effect of his freedom, the currents or impulses, each of which will make a world". Certainly he does not think that "what has always existed is the world itself" (Bergson's letter, quoted in pp. 42-43 of Henri Bergson, *His Life and Philosophy :* Ruhe and Paul). Here Bergson clearly tells us that the world of change is not the all, but there is a God who is the source of it. There is unity of direction which ensures that there is no ambiguity, at least, no chance in the outcome. Thus Bergson is obliged to admit that while reality is a flux in one sense, in another it has a static aspect. But when Bergson recognises the reality of a whole in which changes occur, he cannot say that time is the ultimate reality. So if progress is to be assured, there must be a whole; and if there is whole then time is not the absolute reality. As Bradley puts it, "If there is to be no supreme spiritual power which is above chance and change, our own spiritual interests are not safeguarded. But with any such power it seems to me nonsense to talk of the absolute reality of time" (*Truth and Reality*, footnote to p. 250).

Bergson, off and on, reminds us that the nature of reality resembles our psychical life. Again the only teleology of which we are conscious is the teleology of our human life. Every other teleology is an inference. How does our human life proceed? Man aims at and pursues ends. We cannot say that his purposive willing and deliberate adaptation of means to ends freely chosen are all delusions. The presence of purposes freely chosen does not deprive man of his freedom. He is not in the grip of a law of progress imposed from without; for his ideals are set for him not by events, not by law, but by himself. There is novelty also as the course of moral life is the process through which an abstract ideal acquires flesh and blood, colour and perfume. Moral progress depends on new and untried expressions of creative

spontaneity and freedom. The ideal is not realised, and the process of realisation will be something novel. We have in it the novelty of becoming. Teleology operates in human life without depriving it of its freedom and initiative creation and novelty. We do not say that simply because a purpose is present ; therefore, moral life is a mere mechanical adjustment to a purpose imposed from without. Ethical life is a free spontaneous creative expression of the total active self of man, we have in it not merely the changing process but also the stable purpose. Of course, we do not believe in a dualism between the process and the purpose, for the process is only the expression of the purpose. If we make the purpose external to the process then the process becomes something externally determined. The two are aspects of the one whole. The process and the purpose evolve together ; they are the twin expressions of the concrete life. The end is not predetermined but grows *pari passu* with the activity of its realisation. If then the moral life of man is the free pursuit of self-chosen ideals, cannot we conceive the cosmic life on its analogy ? For after all the ideas of freedom and novelty are derived from human life. "Dynamism starts from the idea of voluntary activity given by consciousness," so the cosmic process may be the free pursuit of ever-growing cosmic ends. As human conduct is free activity and consists in the active creative expressions of the entire abundant past experience in free acts, even so the world may be viewed as a free spontaneous creativity. Random busyness without end or aim may result in abortions and misdeeds but not in genuine creativity. Bergson's creative evolution is a regular continuous evolution fulfilling plans and purposes. The rich world with its wonderful variety is more the expression of an artistic genius than of aimless dilettantism. So a teleology of the highest kind prevails in the cosmic evolution.

It is urged that the absolutist theory that makes the process of the world a mere revelation of the nature of the whole makes man lose his freedom. The work of the universe becomes a twice-told tale. It adds nothing to the original unity. Reality exists ideally in the absolute, and the absolute is experience as it develops in time. It takes all as given and makes freedom an appearance. It cannot be reconciled with a real time process. Reality becomes perfection eternally complete, something to which we can add nothing. But absolutism believes that the principle of wholeness works through man. There is a progressive realisation of the absolute in the world. But if the end is already achieved, then the moral struggle is useless. The analogy of logical

inference suggests how it is possible for the whole to be realised in a real process without making the process lose its sense and significance. We speak about the paradox of inference, that the conclusion must be contained in the premises and must also be something new. Both sides of this are true. Even though the conclusion is contained in the premises, it still requires the exercise of the logical intellect to draw it out. In the same manner, even though the essence of the world process is contained in the absolute, still the effort of man and the process of the world are needed to draw out this essence and make it concrete. We do not say that the movement of thought is either unreal or unnecessary. It is a real activity that creates. Why should we say that the work of the world is either unreal or unnecessary?

Bergson may fear that if there should be an ultimate purpose, then when that purpose is gained, the process or evolution of the universe may come to a full stop. If life were nothing more than the realisation of a plan, then when the goal is reached there must be cessation of activity; but to Bergson there is no finality as there is unending creation. "It is a creation that goes on for ever in virtue of an initial movement" (*C.E.*, p. 105). It is so even for the absolutists as it is impossible for the end to be reached in the time process. The universe can never become the complete expression of reality; for reality is like the complete integer trying to express itself in terms of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, etc. This can go on extending without end but will never reach the limit. The whole remains an ideal only, however much the ideal is realised in the distinctions of the world. It is impossible for us to realise the whole in the finite world. We cannot empty the sea with a shell. We see that Bergson holds to an immanent evolutionary teleology which has the support of absolutists also.

IV. Intellect and Intuition.

Bergson believes that intellect is inadequate to the grasp of reality. We need intuition for it. There are absolutists who are of the same opinion, who hold that intellect gives us the highest *knowledge* while intuition gives the *reality* of it. It is only by a rough usage that we call intuition also a kind of knowledge. For the intuitive knowledge of the absolutists is really the intellectual love where the distinctions of intellect cease to have any applicability. In intuition, the seer and the seen become one. This ineffable unity cannot be described. It is an experience beyond utterance. It

absorbs the soul, and as it does not give it an independence by which it can have an object, description, etc., become impossible. The individual is lost in the eternal essence, and intellect cannot do justice to the fulness and force of that experience. But absolutists generally take care to establish intellectually the reality of that experience. Were it unreal, art, science and morality will lose their significance. This all-comprehensive reality is the presupposition of all our existence. In one sense or other this intuitive experience is admitted by the absolutists from the thinkers of the Vedanta downwards. Plato, Plotinus, Dante, Spinoza, Hegel, Bradley and Bosanquet, adopt it in different ways. But no absolutist identifies it with the immediate data of sense. His intuition is not crude perception. It is the exercise of consciousness as a whole. It is mind penetrated by the heart, knowledge suffused by feeling, intellect transfigured by emotion. Intuitive experiences are the moments of deepest wisdom which give us glimpses into the ultimate essence of the whole which is the true and the real. It is always viewed as the perfection of our intellectual experience as the demand of intellect becomes a fulfilment in it. Intellectual stages will give us only arguments about it, and about; but they will be unillumined. But in intuition the soul meets the real about which it hears and argues through intellect. In the light of this fulness of experience which is the goal of logic our intellectual knowledge looks relative and partial but not false. It alone is whole and absolute, where we have the identification of the knower with the known. In a sense this cannot be called knowledge, as the latter depends upon the existence of the dualism between the two. But the duality is also a unity, and this unitary aspect is emphasised in intuition. If there is anything that baffles intellectual apprehension, it is the whole and nothing else. Intuition is a kind of knowledge and a kind of life. Bergson makes it both, but in him it is more a kind of life. For in intuition the knower plunges into the flux of reality and knows that reality from within, by being one with it. It is knowledge that swims with the stream of life. Here truth is completely identified with reality. And this consciousness is not knowledge. As Bradley argues, truth when it becomes existential nullifies the distinction between the knower and the known on the basis of which knowledge develops. "Truth, while it is truth, differs from Reality, and if it ceased to be different would cease to be true" (*Truth and Reality*). But in the intuition of the absolutists, the knower no longer regards himself as a particular though he is that, as an existing knower in

dealing with others, but as the whole including himself. The whole point is that intuition with absolutists does not mean a break with our ordinary thought or an inversion of our rational procedure, but is only an expansion or completion of the labour of intellect, a grasp or comprehension which sees things as a whole. It is, as Wordsworth puts it, reason in its most exalted mood. It is knowledge of the whole or integral experience. As Kant says, the ultimate principles are only ideals to pure reason while to practical reason they are realities. Matters of faith are also ideas of necessary thought. Our intuitive beliefs are to be logically necessitated by our intellectual proofs. Intuition pure and simple is likely to land us in difficulties. No knowledge is possible if intellect is silenced. No intuitive experience can be the basis of a philosophical truth unless intellect endorses it. Without the aid of intellect intuition is not distinct from mystical gazing, and that is no substitute for philosophy. When Bergson makes intuition a kind of life, it becomes impossible of practice. We have true knowledge, he says, when we become one with the real, when the knower and the thing known become one. "By intuition," Bergson means, "that kind of intellectual sympathy by which one sets oneself in the interior of an object in order to coincide with the very reality of that object with its uniqueness, with that in it consequently which cannot be expressed" (*Introd. to Met.*). To know reality we must become reality. Intuition is an effort to dissolve into the whole. But how is this possible? How can we know anything else than our own consciousness? How can we become one with or assimilate the duration of the plant and the insect or a fellow-man or the world? How can we place ourselves in the moving currents of other objects? To know reality, the individuality or the concrete duration of reality must interpenetrate the being of the knower, but the possibility is, that, when it comes to consciousness, it gets fused with his own duration in one blended whole. And when we say that we know the object, we are either drawing upon our imagination or relying on intellect. If we are doing the former we are opening the floodgates to every form of mysticism, emotionalism and sentimentalism. The only chance for agreement among different intuitions seems to be *chance*. If two people have the same vision they may agree, but their experience will not be authoritative for others. We should somehow bring Bergson's intuition nearer intellect. It is not life but our knowing consciousness keeping in step with the rhythm of the duration of the object intuited. It is only if we make intuition intellectual, that there is any

chance for communicating our intuitions to others. Were it not intellectual, how can an individual who has felt the duration of his own life assume that the other people have the same experience? What is it that compels him to think that the essence of the world is of the same nature as his own consciousness? Intuition reveals to us only our inner life. How can we get from it a conception that shall embrace life as a whole? It has been the tendency of philosophers to make a part express the nature of the whole, and Bergson finds the nature of consciousness a perpetual unfolding or creation and so views the whole existence as a becoming. What is true of the most intimate depths of our inner life becomes the model according to which all other reality is represented. But Bergson cannot assume that the whole reality is of the same nature as the self. No intuition can give rise to this view. It must be due to thought. Thinking alone enables us to grasp the nature of everything else than our consciousness even, if we assume, for the sake of argument, that intuition can give us the nature of our inner life. Bergson admits this when he says, that "dialectic is necessary to put intuition to the proof, necessary also in order that intuition should break itself into concepts and so be propagated to other men" (*C.E.*, p. 251). Intuition is no good if it is not supported and supplemented by reason. When unguided by reason, it becomes instinct; when supported by it, it becomes creative and divine intuition. It will give us truths satisfactory to reason. Reason should sit in judgment over the findings of intuition and evaluate them. Absolute idealism has faith in the hidden harmonies of the universe, because they are to it matters of logical demonstration. The faith of absolute idealism is rational faith. Bergson consents to the co-operation between intellect and intuition. "It is impossible to have an intuition of reality, *i.e.*, an intellectual sympathy with its innermost nature unless its confidence has been won by long comradeship with its external manifestations." Again, "it is reality itself in the profoundest meaning of the word that we reach by the combined and progressive development of science and philosophy" (*C.E.*, p. 199). Bergson, in these passages, recognises that intuition need not throw overboard the results of intellect, but should only continue the work begun by intellect. "It is from intelligence that has come the push that has made it rise to the point it has reached" (p. 177). Here Bergson has not identified his intuition with uncriticised experience or untested feeling, but has clearly advocated a *rapprochement* between the two, science and philosophy. "Notwithstanding his high valua-

tion of intuition, he thought it should always be tested by verification, regarding intuition as a valuable guide-board, but one that, like other guide-boards, might point wrong" (quoted from Bergson's interview with Mr. Henry Holt, in Miller's *Bergson and Religion*, p. 79). We clearly see that Bergson's intuition is not emotional mysticism, but comes very near Spinoza's intellectual love or Kant's practical reason or Schilling's intellectual intuition. But still we cannot class Bergson with absolutists, as a different view of the relation between the two, intellect and intuition, runs throughout his writings. His distrust of intellect is so great that it is enough to make us pause before we venture to rank him as an absolute idealist in his view of this problem.

Though he comes very near the absolutist when he asserts that intellect gives us partial accounts of reality, still he breaks away from them when he holds that intellect does not touch reality at all. We have not much to choose between Bergson and the absolutists when he asserts that while both intellect and intuition give us knowledge of reality, one does it fully and perfectly while the other does it partially and imperfectly. St. Paul says, "We know in part" (1 Cor. xiii. 9). Bergson sometimes and the absolutist always holds to this doctrine. This is the only view that can make Bergson's philosophy logical and consistent. But the other view that intellect distorts and mutilates reality is the more prominent doctrine in Bergson and gives uniqueness to his system. He wants us to grasp reality without the intervention of intellectual formulas. We must take it by storm, seize it by a direct effort of introspection. We should catch reality on the wing without allowing reflection to settle on it and reduce it to a series of states. Intellect cannot grasp reality as it is. It can only arrest it, break it up, spatialise it and schematise it. Bergson agrees with the pragmatists in thinking that intellect is an instrument of action. It is valuable in the world of inert matter where mechanism reigns where there is nothing living, no individuality, no inwardness. It can describe well things at rest. When intellect tries to construct a picture of the universe, it gives us a skeleton of skin and bone and not a body of flesh and blood. Intellect misses the meaning of the whole and gives us relative, symbolic pictures. It gives us snapshots of life while intuition seizes its movement. It scratches only the surface of reality while intuition is needed to grasp its meaning. This view is due to an inadequate appreciation of the nature of reality as well as of intellectual activity.

Reality is looked upon by Bergson as a flow, a duration.

Intellect according to him can grasp only mobiles or differences. It cannot grasp duration but that which endures. It makes of reality, which is unceasing flow or pure duration, a static motionless appearance. If intellect attempts to deal with the real it ends by spatialising it. It mechanises mind. The flow of duration slips between its fingers, and in the place of the flow we have a series of juxtaposed concepts. We get for the perpetual flow, a set of immobile pictures. Reality as it is, is beyond the province of intellect. Philosophy must be intuitive while science may be intellectual. "If science is to extend action on things, and if we can act only with inert matter for instrument, science can and must continue to treat the living as it has treated the inert. But in doing so it must be understood that the further it penetrates the depths of life, the more symbolic, the more relative to the contingencies of action the knowledge it supplies to us becomes" (*C.E.*, pp. 198-199). Science treats of the immobile and the lifeless, but what is, is fluid and living. Philosophy dispenses with the symbols and knows the real. Science, according to the absolutist, is viewed as giving us partial and imperfect knowledge of reality, but according to Bergson it has no ontological significance at all. It is a product of fancy and imagination. "The philosopher must go further than the scientist. Making a clean sweep of everything that is only an imaginative symbol, he will see the material world melt back into a simple flux, a continuity of flowing, a becoming, and he will thus be prepared to discover real duration there where it is still more useful to find it, in the realm of life and consciousness" (*C.E.*, p. 369). There is an absolute distinction between intuition and intelligence, philosophy and science. On this view, the absolutist theory that intellect leads to intuition, science to philosophy, becomes a meaningless absurdity.

What is Bergson's distrust of intellect due to? Is he right in thinking that intellect can deal only with the static and the dead, the logical and the mathematical? As reality is looked upon by Bergson as vital and psychical in its nature, intellect, which is according to Bergson logical and mathematical, becomes abstract and subjective. Intellect becomes limited to the world of inert matter. Mechanical categories will not give the essence of life. Intellect becomes incapable of grasping reality as it is. If we assume that science is identical with mechanism, then this conclusion is inevitable; it requires supplementation by another, philosophy. To Bergson, intellect and science are mechanical. "Intuition and intellect represent two opposite directions of the work

of consciousness ; intuition goes in the very direction of life, intellect goes in the inverse direction " (*C.E.*, p. 267). But, following Hegel, we regard thought as including not only the Kantian categories of understanding but also those of ethical and æsthetic insight, and we shall find that intellect is adequate to interpret the whole of experience. Thought would then become an explication of the real.

Besides this Kantian intellect as confined to the categories of the understanding, the other fact that led Bergson to think that intellect was mechanical is the consideration that the intellectual man is pre-eminently a tool-making animal. As the animal consciousness has no control over matter and cannot make mechanical appliances, and as the intellectual man can do these things, it is inferred that intellect has been evolved to enable him to control matter and harness it to man's needs. Bergson admits that man is not only a tool-applying but also a tool-making animal. Intelligence is " the faculty of manufacturing artificial objects, especially tools to make tools ". It is capable of " indefinitely varying the manufacture " (*C.E.*, p. 146). This means adaptation, or creative construction. Though the application of tools, symbols and concepts may be mechanical, still the first making of them cannot be that. Even Mr. Lyndsay thinks that this account does not do justice to the nature of intellect. " The use of the machine may be mechanical but not its invention for that requires the insight of genius " (*Philosophy of Bergson*). Knowledge of the universal is an act of spirit, while its application may be a matter of routine. It is an act of spirit or intelligence higher than that of mechanical understanding. So when Bergson grants that by intellect man makes tools, he also grants that intellect is not mechanical. It then follows that for understanding life and its secrets, we do not require a process opposed to intellect.

By the cleavage his metaphysics makes between the world of matter and the world of life and mind, Bergson is led to distinguish between intellect and intuition. Life in nature is due to the *elan vital* pushing itself through matter. Matter is dead while life and consciousness are living. To live is to create and invent. Bergson believes that because intellect mechanises life it has to be overthrown, and we have to take for our pilots intuition and faith. But surely protests against the mechanisation of life do not amount to protests against the use of intellect; for rationalist thinkers since the time of Plato have protested against the mechanisation of life and mind. Rationalism is not bound to treat the universe in such a dead and wooden way. Besides we have seen how

Bergson is wrong in thinking that life and matter are absolutely opposed, as they are only the lower and higher manifestations of spirit. In that case the opposition of thought to life breaks down. Continuity between life, and matter means continuity between intuition and intellect. Thought becomes only a progressive interpretation of experience. The logic of Bergson's argument requires us to postulate a continuity of spirit throughout reality, as matter, life, consciousness are only the slowly developing stages of the one spiritual ascent. Thought becomes adequate to its grasp. Intuition and mechanical understanding become the high and low aspects of a process, essentially the same throughout its stages. The philosophical or the intuitive point of view is that of absolute knowledge, and constitutes the highest kind of intellectual experience, while the mechanical view is the lowest.

Bergson thinks that intellect can deal only with abstract, repeating identities. As reality is concrete and ever creating differences, intellect must confess itself humbled in its presence. It can use words as tools or symbols. The application of these depends on repetition. Intellect can never grasp the individuality of the real, but can only reconstitute it, "with given and consequently stable elements" (*C.E.*, p. 173). Intellect is here reduced to a bare apprehension of identity. Prof. Bosanquet has subjected this doctrine to a careful examination (see *Logic*, vol. ii., on "A Defective Formulation of the Inductive Law of Reasoning"). He considers it incorrect to say that intellect is inadequate to the grasp of difference. As a matter of fact, intellect is inadequate to the grasping of mere identities. We can understand only an identity in difference. Bergson is wrong in thinking that intellect cannot deal with novelty. Psychology tells us that consciousness lapses when the same situation occurs again and again. The responding movement becomes automatic. It is only when a new situation arises, when the accustomed action is not adequate to it that consciousness appears on the scene. Then has intelligence to devise a fresh action and react to it. And Bergson admits all this when he says that the function of intellect is not merely to repeat a movement but to reply to a new need. He grants that intellect has a capacity to deal with novelties and changed situations. It is quibbling to argue that though intellect deals with novelties, it does so by way of rearranging old elements or regrouping given parts. It is hard to conceive that when intellect is confronted by a new situation what it does is to first break it to pieces, affiliate them all

with old elements and then apply set rules. Viewing varied and different situations in the light of universal principles is not a mechanical act where we break the given to pieces and then apply the calculating machine. It is an act of intelligence which is much more than a mere mechanical repetition. It is the act of binding together a manifold by means of an identity. It is replying to a new situation. It is the adaptation of response to stimulus. It is not routine repetition. The truth contained in Bergson's statement is that intellect cannot deal with mere difference but only with sameness in difference. But Bergson is wrong in thinking that it can deal with only absolute identities. Intellect will admit its insufficiency and confess its impotence in the presence of absolute difference as well as absolute sameness, but both these are unreal. What exists is an identity in difference. However much Bergson might protest against the description of reality or creative evolution as an identity in difference, our discussion of the relation of life to matter, and mechanism and teleology has revealed to us how Bergson is compelled to consider creative evolution as an identity in difference. If it is so, then, instead of intellect being inadequate to the grasp of reality or sameness in difference, it is only to its grasp that it is adequate. "So far from its being true that an organic unity is something that we cannot understand, it would be nearer the truth to say that we can understand nothing else" (Caird, *Philosophy of Kant*, vol. ii., p. 530). "All the charges of narrowness, hardness, meaninglessness which are so often directed against thought from the quarters of feeling and immediate perception, rest on the perverse assumption that thought acts only as a faculty of abstract identification" (Hegel, *Encyclopædia*, sec. 115, Wallace's translation). It is this abstract view of intellect that makes Bergson think that intellect deadens everything that comes within its paralysing influence. All this difficulty is due to a failure to appreciate the true nature of logical process and intellectual activity. Intellect is not merely repetitory but also constructive and creative. It can create novelties and understand novelties, for they are not only differences but also identities in differences. Creative genius in science, art and fiction is only the highest form of intellect. It is intellect viewed as constructive imagination.

Bergson argues that conceptual knowledge will not give us knowledge of the whole, though "we easily persuade ourselves that by setting concept by side of concept, we are reconstructing the whole of the object with its parts thus obtaining so to speak its intellectual equivalent . . ." (*Introd.*

to Met., pp. 15-16). Bergson argues that if conception should seize the component parts of the objects, then the putting together of the concepts may perhaps result in the knowledge of the whole. But concepts give us only partial views, expressions or notations, and not real parts. If concepts should give us real parts, we could fit them into the whole and acquire the total vision, but what can we do with a mere notation or a scheme of symbols? Intellect "substitutes for the interpenetration of real terms the juxtaposition of their symbols" (T. & F.W.P., l. 34). We cannot reproduce continuity by adding concepts to concepts. But this whole criticism is due to a confusion between the symbol and the object symbolised. Bergson argues that logic which deals with static concepts cannot give us knowledge of reality which is flow. But does Bergson really believe that in the material world these concepts give us the realities themselves? If in the world of life and duration they do not give us realities, even so do they not give us realities in the world of matter. So they must be inadequate there also. But if they will suffice in the world of matter they must suffice in the vital world also. It is the function of a sign to signify, but for this it need not resemble or reproduce the thing signified. If this function of intellect is admitted as Bergson admits it when he considers the concepts to be valid in the world of matter, then it follows that intellect is good right through, in logic and mathematics, in biology and psychology also. But if we mistake its function, then it becomes bad all through, notwithstanding Bergson. The whole fallacy is due to the confusion of the sign with the thing signified, a relation of symbols with a symbolised relation.

"Created by life, how can intellect embrace life, of which it is only an emanation or aspect?" If intellect cannot grasp life because it is evolved by it, then the faculties which can grasp it, must be something not evolved by it. But is Bergson prepared to say that intuition has not been evolved by life? If intuition is also a product of life, how can it enable us to grasp life of which it is an emanation?

What, then, is the good of scientific knowledge which is untrue to reality? It is of practical utility. For practical purposes we conceptualise reality and spatialise spirit. So the world of our everyday life is only an appearance and not reality. We cannot agree with Bergson in thinking that intellectual knowledge is knowledge of an unreality. Granting that intellect can only grasp matter, is not matter real? It is the inverse movement of life and so even though life is

not grasped by intellect, its inverse is apprehended by it. All that Bergson's contention comes to is this : while reality in its fulness cannot be grasped by intellect, still parts of reality can be known by it. Intellectual knowledge has ontological value ; only the whole of reality baffles it. Intellect does not deal with unreals but with partial reals. It may be argued that even matter is duration provided we re-attach it to the whole to which it belongs. Duration according to Bergson should be predicated of the material systems which science isolates, " provided such systems are reintegrated to the whole ". Parts cut off from the whole are abstract ; they have to be fitted up into the whole to become real. It is the task of science to bind parts to parts in wholes. So intuition which is supposed to give another kind of knowledge is only intellect more thorough and radical than what it would be when it deals with parts. If the scientific method is pursued to its end, we get the philosophic view. Bergson admits this when he says, " The more physics advances the more it effaces the individuality of bodies and even of the particles into which the scientific imagination breaks by decomposing them : bodies and corpuscles tend to dissolve into universal interaction " (*C.E.*, p. 188). " Already in the field of physics itself, the scientists who are pushing the study of their science furthest . . . tend to place themselves in the concrete duration " (p. 369). Certainly, then, the philosophical point of view is not opposed to that of science. The philosophic method is just the scientific method carried on more vigorously. Intuition is not opposed to intellect, but is only intellect at its best. Intellect at its lower stages deals with parts and is called scientific ; at its higher stages it deals with the whole and is called intuition.

That there is a higher capacity than understanding which enables us to grasp the concrete whole in its wholeness is admitted by most philosophers at the present day. The question is only about the nature of that capacity. Bergson considers it to be more perceptual than conceptual. To him knowledge of reality as it is, in its individuality and concreteness, can only be perceptual. It cannot be conceptual to Bergson who views conceptual knowledge in an abstract and unreal manner. But we are afraid that it cannot be even perceptual. For with him perception is occupied with the object as a number of features assembled. The sense organs by their selective activity break up the object ; " Our eye perceives the features of the living being, merely as assembled, not as mutually organised. The intention of life, the simple movement that runs through the lives, that binds them

together and gives them significance escapes it" (*C.E.*, p. 186). So intuition which should be synthetic cannot be perceptual it cannot be conceptual. What else is it? Bergson tells us it is integral knowledge which makes a whole of abstract relations discovered by intellect and the thinghood grasped by instinct. Intuition combines the fruits of instinct and intellect. Instinct deals with things and intellect with relations. Instinct has direct contact with reality. It is moulded on the very form of life. If questioned it would give up life's secret. But this is purely an assumption. Why should we think that instinct is adapted to life? Life is full of novelty, contingency and unforseeability, and instinct has none of these features. How, then, can it give us the secret of life? Instinct is automatic and stationary while life is mobile and progressive. How can we fathom life the mobile and the progressive by an appeal to instinct the immobile and stereotyped? If Bergson is correct in thinking that instinct is moulded on the very form of life, then we should say that life is a machine as instinct is. If life is novelty then instinct will not help us in the matter of life. But to Bergson instinct has direct contact with reality, only being undifferentiated it does not seek reality as a whole. Intellect on the one hand seeks reality as a whole, but by itself is not able to grasp it. Intuition is instinct become self-conscious, or intellect become disinterested. Intuition is the disinterested knowledge of the object in its wholeness. "If there is a means of comprehending a reality absolutely instead of knowing it relatively, of entering into the object instead of selecting points of view over against it, of having an intuition of it instead of making analysis of it, in short, of grasping it independently of any expression and any translation or symbolic representation; that is metaphysics itself, and this metaphysical knowledge can be had only in intuition. "An Absolute can only be given in our intuition" (*Introd. to Met.*). Instinct rises to intuition with the aid of intelligence. "Without intelligence, it would have remained in the form of instinct, riveted to the special object of its practical interests and turned outward by it into movements of locomotion" (p. 178). With intelligence it becomes integral knowledge. Intuition is neither perceptual nor conceptual but a combination of both; it is neither instinctive nor intellectual but a combination of both. It is something like artistic perception which the soul, freed from practical necessities, has. It is æsthetic feeling. "That an effort of this kind is not impossible, is proved by the existence in man of an æsthetic faculty along with normal perception" (p. 186).

It is æsthetic intuition that can catch hold of the continuity of life. But this æsthetic feeling springs out of reason. The greatest works of art are the most rational and involve a good deal of training (*C.E.*, p. 7). It is true that before the work is finished it could not have been foreseen. But this failure to foresee is not incompatible with reason. The new creation is a unique synthesis of given elements. Though we know the product will be rational, we are not therefore able to say beforehand in what way the rationality will express itself. There are so many ways of being rational. When Bergson compares intuition to the creative genius of the poet or the artist's vision or the trained instinct of a literary writer who synthesises in the desired form the mass of material collected by him, it comes very near reason and intelligence. There are positive descriptions of this philosophical intuition which clearly bring out its intellectual affinities. Bergson compares it to the creative vision of the scientist. The scientist when he perceives the working of the universal in the particular grasps reality as it is in its individuality and this is intuitive or integral knowledge. When Bergson claims that we owe to this faculty all the greatest discoveries of sciences, when he tells us that in every system of philosophy we have facts which are vivified by intuition (*C.E.*, p. 251), when he puts it to us that a successful practice of intuition requires previous study and assimilation of a multitude of abstract data, we feel that his intuition is not much different from our scientific imagination. It is nothing mysterious. Dr. Carr, the best-known interpreter of Bergson in England, describes it thus, "it is the most common and unmistakable fact, and that we only fail to recognise it, because it is so absolutely simple that it requires a strong effort to turn the mind from its intellectual bent in order to get this non-intellectual vision" (*The Philosophy of Change*). But it is not non-intellectual vision but a vision in which abstract analysis is at its lowest. It is creative imagination (*M. and M.*, p. 76). Bergson is not a supporter of mysticism which goes against intellect, for he says: "If by mysticism be meant (as it almost always is nowadays) a reaction against positive science, the doctrine I defend is in the end only a protest against mysticism" (quoted in Lyndsay, *Philosophy of Bergson*, p. 19). Bergson is not willing to identify it with mystical experience. It is a kind of intellectualism. To quote Bergson himself, "there are two kinds of intellectualism, the true which lives its ideas; and a false intellectualism, which immobilises moving ideas into solidified concepts to play with them like counters" (*ibid.*, p. 19). Were intuition completely

extra-intellectual, then it becomes a subjective affection and cannot pretend to be a philosophic method. But the whole of this long discussion indicates that in Bergson intuition is both the necessary condition of psychical activity as scientific hypothesis is, and the summit of the work of thought as the philosophic vision of the whole is.

We may here note the remarkable fact that following the absolutist tradition and in opposition to the empirical tradition, Bergson holds that practicality and action are opposed to the attainment of the higher level of insight and intuition. To become metaphysical we must cease to be practical. This may well be in the words of Plato or Plotinus. Pluralists and romanticists preach that in practice we come across reality, and all speculation is the source of illusion. The search after truth requires, according to the absolutist tradition, freedom from maya or detachment from the illusions of ignorance and selfishness. It means only that in the world of practice we are absorbed by the details and have not the detachment for catching the universal. To gain an insight into the mysteries of the universe we require periods of contemplation. In meditation we become conscious of the inner nature of freedom. Freedom alone can comprehend freedom. In intuition we have a direct vision of reality, life envisaging itself. The detachment necessary for it is emphasised when we are asked to turn away from the world of practice and abstract reasoning. But the products of meditative insight vindicate themselves at the bar of reason. Bergson employs the absolutist device when he proves the inadequacy of intellect by pointing to the deadlocks and contradictions in which the exclusive use of intellect lands us. Bergson asks, "would the idea ever have occurred to us to doubt the absolute value of our knowledge, if philosophy had not shown us what contradictions our speculation meets, what deadlocks it ends in?" (*C.E.*, Introd., pp. xi-xii). The logical inference from this fact is that if parts with which intellect deals set themselves up for the whole, then antinomies arise to point the moral that they are parts and not whole.

When all is said and done, Bergson's conclusion comes to this, that there are aspects of reality which our understanding cannot comprehend. Bradley, the greatest living absolutist, tells us that there are problems which are inexplicable and insoluble, for example the relation of a finite centre of experience to other centres and the whole. To him a universe which would reveal its secret essence to a finite understanding would be a poor substitute for the actual one. "The

complete experience which would supplement our ideas and make them perfect is in detail beyond our understanding" (*Truth and Reality*). Intellect should be supplemented by the other sides of consciousness if it should reach its end. Man's whole consciousness is needed to feel the central reality. There is more than logic in life. But philosophy simply points out the logical necessity of a whole which is of the nature of a concrete universal. There philosophy ends and intuition fulfils that experience. For this experience man has to raise himself above the narrow, practical and utilitarian point of view and see life as it is. But this does not mean that practicality and action are opposed to truth and knowledge. It only means that we have to lift our souls above the business of life to find out its hidden secrets. In that experience we free ourselves from the trammels of abstract ratiocination; we have there an evanescence of the intellectual activity.

V. God.

Bergson's account of God is once again a struggle between his logical and empirical tendencies. His logic requires him to make his God an impersonal principle from which both matter and life spring. It is not to be identified with the life current, for it is the spring of both life and matter. "I speak of God as of the source whence issue successively, by an effect of his freedom, the currents or impulses each of which will make a world; he therefore remains distinct from them, and it is not of him that we can say that most often it turns aside or it is at the mercy of the materiality that it has been bound to adopt" (*Bergson*, Paul and Ruhe, pp. 43-44). God is not the *elan* but the ultimate transcendent. He is not an immanent principle but a transcendent cause. There is not much to choose between Bergson's transcendent cause and Spinoza's substance. Bergson ends in either deism or pantheism. If Bergson says that this transcendent principle is of the nature of becoming and not being, it is a matter of opinion unsupported by argument. But the empirical tendency has to be satisfied. He wants to give a God which is utterly good and not the whole which contains both good and evil. So he tells us that the life current which is utterly good but is not able to gain its end on account of the obstructive principle of evil, though not the Absolute still is the finite God which alone can satisfy the popular demands of religion. It "need not be held responsible for evil" (*C.E.*, p. 255). Sometimes Bergson holds that the interaction between the

two, life and matter, is the central reality and so God. God then becomes the unfinished universe and with it he is ever growing. But the two prominent notions are those of the absolute or the whole and the life current. It is the same old trouble between the absolute of logic and philosophy and the God of ethics and religion. As the popular consciousness wants a personal God, Bergson is prepared to grant personality, and make the primal source a person. While he recognises the difficulty of giving any positive conclusion about the original unity (see *Bergson*, Paul and Ruhe, p. 44), still he allows himself the privilege of characterising it as personal. "This source of life is undoubtedly spiritual. Is it personal? Probably. Of course, personal in a different way without all those accidental traits which in our minds form parts of personality and which are bound up with the existence of the body. But personal in a larger sense of the term—a spiritual unity expressing itself in the creative process of evolution" (Dr. Louis Levine's interview with Bergson, *N.Y. Times*, 22nd Feb., 1914). But God must be personal in the accepted sense of the term. M. Le Roy, the famous French interpreter of Bergson, referring to Bergson's idea of God, says, "We cannot regard the source of our life otherwise than as personal. We cannot regard Him as impersonal. We seek in Him our personality. God is personal in that He is the source of our personality." I ask whether this conception of God is different from that of the absolutist's. Even in their scheme God is the source of our personality, and if that be sufficient argument, they too can regard God as personal.

Fully aware of the conflict between absolute idealism and orthodox theism, Bergson tries hard to be on the side of orthodox religion. But when he holds that God can be realised only by a transcending of human conditions, when he identifies religion and philosophy, when he insists upon the inadequacy of intellect and the need of intuition to grasp the whole, and when he swings between God as the whole and God as part, namely, the *elan vital*, he is quite like the absolutists.

VI. The Individual Self and Freedom.

The account of the individual which Bergson gives is not different from that given by the absolutists. The soul is a product of the world being. Its destiny is to be reabsorbed into the whole as the mist from the ocean must slip back into the shining sea. Only the absolute can be supposed to

be completely real. Man is only attempting to become perfectly real. When man completely surrenders his lower nature, then he becomes divine. The distinction between God and man is not one of kind but one of degree. Bergson holds to a fundamental identity between the two; but, unlike the absolutists, he makes God also a being who struggles with matter. Identity of nature alone can render possible free communion between man and God. Both Bergson and the absolutists agree in thinking that the whole alone is real, that the individual is partially real, and that for him to attain his goal the resisting matter will have to be overcome, and that when the individual becomes dissolved in the whole then he becomes one with it and his life-end realised.

The individuals of the world are free when they escape from the mechanism of habit and routine. The individual is free in so far as he maintains his true nature as spirit, and absolutism also tells us that man is free in so far as he acts from his higher nature. Man is free as he is a unique expression of God. "Life in the material world participates in the liberty" of the original impulsion. So long as we are human this freedom can only be partially realised as we have to struggle against the inertia of matter. When we become the principle of life in its purity we are absolutely free.

The objection repeatedly urged against absolutism that it gives freedom to God or the whole and not to man holds against Bergson's philosophy also. Bergson establishes the existence of an underlying spiritual principle beneath the particular manifestations of life. The one *elan vital* runs through all the divergent lines of evolution. In *Time and Free-will* Bergson emphatically asserts the freedom of the individual who freely acts on matter. But as with the absolutists this is only a derived freedom; for the individual, when cut off from the universal activity of life, is an unreality. Look at the following passage which might well be from Spinoza or Hegel: "Life, as a whole, from the initial impulsion that thrust it into the world, will appear as a wave which rises . . . this rising wave is consciousness . . . on flows the current, running through human generations, subdividing itself into individuals. Thus souls . . . are nothing else than the little rills into which the great river of life divides itself, flowing through the body of humanity." The individual is a particular manifestation of the universal life and his position is not a whit better because Bergson substitutes for the material system of the scientist and the universal mind of the absolutist the dynamical life. What the man in the street wants is the freedom of the individual in

his own right as a separately existing entity and Bergson has not granted him that.

Our conclusion is that Bergson's point of view so eloquently set forth is not a system but only a philosophic vision. Bergson is more a prophet than a philosopher, more a seer than a dialectician. His vision requires for its basis and support a system of absolute idealism.

III.—PROFESSOR JOHN COOK WILSON.

By H. A. Prichard.

The death of John Cook Wilson, Wykeham Professor of Logic in Oxford since 1889, is a serious loss for Philosophy. How great the loss is can only be appreciated in Oxford, where, following the natural bent of his mind, he devoted his indefatigable energy to teaching rather than to writing, and to those who knew him best the feeling of loss is increased by the sense of what he might have done had the circumstances of his life been different, and even had he been granted a few more years in which to carry out to completion the results of his later reflection.

The following summary of his life is condensed from a notice by Mr. H. B. W. Joseph in vol. vii. of the Proceedings of the British Academy, to which the reader is also referred for a sketch of his philosophy.

Born in 1849, the only son of a Methodist minister, Cook Wilson went from Derby Grammar School to Balliol in 1868. There he read both Classics and Mathematics, and obtained a First Class in each, both in Moderations and in the Final Examination. In 1873 he became Fellow of Oriel and remained so until in 1901 he migrated to New College. While studying in Germany he came under the influence of Lotze, and at the same time he made the acquaintance of his future wife, Charlotte Schneider, whom he married in 1876. Mrs. Wilson's health failed for many years, and this threw on him a severe burden of daily nursing and household duty. Not long after her death in 1914, the mischief which proved fatal to him declared itself, and he only survived his wife some eighteen months. His small tale of published matter included a pamphlet "On Military Cycling or Amenities of Controversy" (1889), and another of 145 pages "On the interpretation of Plato's *Timaeus*" (1886), which arose out of what he considered an insufficient reply by the author to his review of R. D. Archer Hind's edition of the *Timaeus*. Besides these writings Cook Wilson published separately only his *Aristotelian Studies I*, on the structure of chapters i.-x. of the 7th Book of the *Nichomachean Ethics* (1879), his inaugural lecture

on "An Evolutionist Theory of Axioms" (1889), memoirs of the Revd. T. W. Fowle (1903) and of D. B. Monro, Provost of Oriel (1907), and a book on the *Traversing of Geometrical Figures* (1905). He, however, contributed fairly constantly to learned periodicals, such as the *Classical Review*, the *Classical Quarterly*, the *Journal of Philology*, the *Academy*, the *Transactions of the Oxford Philological Society*, the *Archiv für Geschichte der griechischen Philosophie* and the *Philologische Rundschau*. These papers were chiefly on the problems of text, interpretation, or doctrine in Plato and Aristotle. He also prepared papers for the British Academy on universals, and on the good will, but neither was completed nor presented.

He was singularly human—appreciative of the simpler pleasures, generous, warm tempered but easily appeased, and resentful of anything he thought unjust.[1] Unselfish, affectionate, and loyal almost to a fault, he had a great capacity for friendship with people of all ages and many different kinds. A friend writes of him: 'He was a delightful holiday companion and a careful, enthusiastic, and energetic guide to good scenery, and to other good things as well. . . . At times he would show a most boyish vigour, walk, climb, and run with the best; at the age of sixty he bathed on a sudden impulse in an ice-cold tarn on the snow level in Switzerland, and he could be on his legs for hours with a total disregard of food. . . . One needed to be no logician to perceive how acute were his powers of thought, though sometimes it seemed as if he were using a finely tempered instrument on an unworthy subject. For instance, in order to show that an incoherency of plot did not necessarily prove the *Iliad* to be the product of more than one author, he had apparently read through a vast quantity of contemporary literature, novels, detective stories, and the like, to discover logical flaws, loose threads, and inconsistencies. . . . A first-rate scholar in the technical sense he undoubtedly was; certainly no narrow specialist; and if the diversity of his interests was in some respects a hindrance to him, it was in other ways part of his strength, and typical of the strength, as it seems to one outside the University, of Oxford as opposed to other schools of learning.'

To speak of him dispassionately as a philosopher is difficult for one who, like the present writer, enjoyed uninterrupted intercourse with him since he first became his pupil some five and twenty years ago. His equipment was such as only

[1] The retributive theory of punishment was among his favourite doctrines.

one or two in a generation can hope for. He was at once a good mathematician and a good scholar; an intensive study in his earlier years of the great philosophers, and especially of Plato and Aristotle, gave him a first-rate knowledge of them, which formed a vital though unobtrusive background for his own inquiries. He had what may be described as a great feeling for facts. His mind was independent, cautious, and intensely acute. Thus equipped he seemed one of the few who are capable of doing work of that rare kind which is done once for all. And yet, though Professor for twenty-six years, without official duties of a practical kind to distract him, he published nothing constructive.

The explanation of this failure, which to many of his friends seemed tragic, lies in a combination of facts. First and foremost, no doubt, stood the hindrance of his wife's ill-health, which in the end wore him out. But it is not clear that even without this his achievements would have matched his capacities. The multiplicity of his interests were a continual source of distraction. A chance statement to which he objected, say on Greek music, or on the *ὑποζώματα* of Greek ships, would set him researching, and once this process had begun, no one could say when it would stop. One problem would lead to another, and all critical problems were to him equally fascinating. He had a passion for detail; he found it difficult to leave a problem until he had exhausted it in all its bearings (his thoroughness often put a severe strain on his audience); and a hatred of error in all forms made it difficult for him to allow any statement to which he objected to pass without dealing faithfully with it—always provided that he considered the author worthy of notice.

Again, his most obvious strength lay in criticism. "What showed itself to me," writes Prof. J. A. Smith, "was chiefly a persistent and penetrating acuteness in tracing out the springs of error so that one came away from a discussion in which he led, with a mind swept clear of cobwebs and prepared afresh for the reception of the truth in the matter. That was what I feel I gained in the way of education by contact with him. Above all he helped to disentangle one's feet from the snares of verbal expression and so to set free one's mind for reconsideration of the topic in hand."

Undoubtedly his sense of the many pitfalls to which philosophers are exposed grew on him. "Be comforted," he once wrote to a depressed student. "Philosophic thinking is always a great struggle. It is, I am sure, far harder than any other, and I don't suppose there is any other subject in which long and determined thought may be so apparently unrewarded.

It is full of disappointments. An investigation carried on perseveringly for a long time may end in the discovery of a fact of consciousness which upsets the theory so laboriously worked out. The utmost gain one has seems to be that one has found out what will *not do*. Now this is a gain, but one is not at once prepared for the new effort which it suggests. The trouble is that one feels life is so short, but philosophy seems very much longer." He considered writing on philosophy, when young, mere presumption, and cleverness a snare, while the comment to be expected from him on a modern book was that from lack of reflection the writer had in the first few pages unwittingly committed himself to a theory which vitiated the whole book.

Moreover, when, as he said, he began to think things out again for himself from the beginning, he found himself led in a direction very different not only from the tendencies of the schools in which he had been educated but also from those of his contemporaries. This made him increasingly anxious to avoid committing himself, not only until he was sure of his ground, but also until he felt that he could put his view in a form which would compel conviction.

He had, too, a growing fear of the petrifying effect of publication. "There is a greater danger," he wrote, "of fixing one's thoughts by publication and arresting one's own progress than is generally recognised. I have often noticed that quite able thinkers have the greatest reluctance in retracting anything to which they have committed themselves by publication though the mistake may be perfectly obvious to the critic (whose work is incomparably the easier). But the (printed) letter killeth, and it is extraordinary how it will prevent the acutest from exercising their wonted clearness of vision.

"I hope, by my present method,[1] to gain that greater clearness which is usually the result of printing for others to read, and at the same time to preserve the comparative freedom one enjoys as long as one's thoughts are only in manuscript. I hope, also, it will enable me at least—for I dare not count on more—to remain nearly as amenable to reason as if I had printed nothing."

It is therefore not surprising that he threw his energy mainly into teaching. Contact with other minds gave him the stimulus and sympathy he needed, and the relation of master to pupil gave him the necessary freedom to develop his own views in his own way. As a teacher he was in some ways unsurpassed. To those whom he thought genuine

[1] *I.e.*, of printing privately portions of his lectures on logic.

students he was more than generous with help and encouragement, grudging neither time nor trouble in dealing with their difficulties. He was not indeed a prophet with a gospel, unless the conviction that above all things one must not let oneself be put off with shams has a right to the title. His lectures, too, though not unrelieved by humour, were apt to be abstract and rather dry (his habitual use of symbols, supported by illustrations though they were, was trying); and he was only seen at his best in his informal discussions, in which he cast aside reserve, and his audience could watch the working of his mind at close quarters. But his acuteness was a revelation. There was infection in his conviction that the truth was a matter of high importance, that slovenly and confused thinking was a crime, and that words and phrases were a snare to great and small alike. (Technical terms such as 'ideation,' 'reproduction,' 'cognition,' were to him simply obstacles to thought, and he was a living illustration of his view that the truths of philosophy can be expressed in simple language.) It was difficult, too, to come away from one of his discussions without feeling that for the moment at least one had acquired a better mind and learned something of the way in which a problem should be tackled.

Of his success as an interpreter of the historical philosophers estimates would probably differ. His interpretations, though never hasty, were nothing if not confident, and liable to be extreme. To me they appeared characterised by an almost uncanny power of following the working of the author's mind. The problem before the author was treated as a living one, to be considered in itself, in order that the first essential, the precise form in which it presented itself to the author, might be revealed. "What would a man," he used to say, "in such and such an attitude naturally ask himself?" Whether the subject was an obscure passage in Aristotle's *Metaphysics*, or a portion of Kant's *Critique*, a certain directness of interpretation was conspicuous, due to the conviction that however obscure the language, the facts referred to were comparatively familiar. And he was far too conscious of men's liability to hold different views in different contexts to expect an impossible standard of consistency.

To give an outline of his philosophy is not easy. The only systematic exposition of his views is to be found in his Logic lectures (parts of which were eventually printed privately, chiefly because the material had expanded beyond the limit of a year's course). These lectures were, in sections, constantly and increasingly being rewritten, and in their present form consist of several strata, of which the earlier plainly

require revision, and the latest suggests that the phase last reached was essentially one of transition. Moreover, study of this material suggests that Cook Wilson's plan of confining himself to lectures was, even from his own standpoint, not without its disadvantages. No one could have attached more importance to preciseness of statement, but the consciousness that he was not writing for publication seems to have led him at times to exact too little of himself in this respect, and although no one who knew him could think his meaning anything but clear to him, the necessity of meeting objections to which publication would have given rise, would have enabled him to make clearer to others not only his special views but also the way in which they held together. The fact was that he disliked criticism, not, I think, from unwillingness to stand by his conclusions, but from distaste for controversy, and from the conviction that the answer to criticism, where not due to misunderstanding, would chiefly consist in retraversing old ground in the way of prolegomena on which his mind was made up, and for the rediscussion of which life was too short.

The point of departure of Cook Wilson's views lay in his unwavering conviction of the truth of mathematics. In mathematics we have, without real possibility of question, an instance of knowledge; we are certain, we *know*. Those who talk of non-Euclidean spaces are using mere words to which no thought corresponds. It is impossible to conceive hyperbolic or elliptic space. The fundamental objection which confronts those who suppose themselves able to conceive such spaces lies in the fact that the corresponding figures contradict our faculty of construction; we cannot, for instance, imagine straight the so-called straight lines of which they speak, and to suppose, as they do, that this does not matter is erroneous and due to an illusion about the function of imagination in geometry. They can be refuted on their own ground, since it can be shown that they use only the conception of *Euclidean* space in the hypothetical reasoning in which their theories about such spaces consist, and it is a mere mistake to suppose that a train of hypothetical argument will never lead to a contradiction of a certain kind, because up to a given point it has not done so.

In consequence the scepticism inherent in the philosophy of those who follow the metageometricians was wholly alien to him.[1] The coherence theory of truth, again, was, accord-

[1] At one time he thought of devoting himself to publishing a refutation of the paradoxes of Mr. Bertrand Russell. He considered that they were based on verbal fallacies, *e.g.*, that the paralogism that the class of classes

ing to him, not only impotent to lead to any positive result but was vitiated from the start by the existence of mathematics, where we presuppose that no future experience and no further advance either in mathematics itself or in other departments of knowledge can contradict the knowledge which we already have. (He was fond of insisting that in that reasoning which is knowing we presuppose that the knowledge which constitutes the premises cannot be modified, in the sense of contradicted, by any future experience.) Equally alien to him was the position represented in Mr. Bradley's *Appearance and Reality*. Neither knowledge nor reality admitted of degrees. Reflection on our experience may and does give rise to puzzles in plenty, but the result is not to show that our fundamental notions about the world are inherently self-contradictory; where such contradictions are alleged, the cause lies in some fallacy, usually simple, in which we have been unconsciously involved. On the contrary, space, time, bodies, minds (and when we reflect we see that we really do know what we mean by these terms) are real and in no sense 'appearance'. In fact, his outlook might be described as essentially 'objective'. No student who followed and accepted the workings of his mind would expect the study of philosophy to transform his unreflective view of the world into something unrecognisably different. It was the business of philosophy to study the presuppositions of the sciences, but the man of science had no need to fear that as a result, the sciences would be shown to be illusion or even to require revision in detail. Philosophy could add to the knowledge which was science by contributing the solution of its own problems, but it could not destroy or interfere with scientific knowledge.

A criticism of the chapter on Relation and Quality in *Appearance and Reality*, entitled 'On a supposed infinite process caused by relating the relation between two terms to the terms of the relations themselves,' is so typical of Cook Wilson's method of handling problems that the substance of it is worth giving. After asserting that Mr. Bradley falls into a merely verbal fallacy, owing to the use of abstract terms without inquiring into their meaning in a given context or testing them by examples, he argues thus:—

Let A and B be the terms of a relation and R_1 the relation between them. R_1, it is contended, since it is different from A, will stand in a relation to A. Let R_2 be this relation. Similarly R_1 will stand in a relation R_3 to B. Thus, besides

is a member of itself, arose from speaking of the class of classes as *a* class. (See Mr. Joseph's article already cited.)

the original term A and B, and the original relation R_1, we have two new somethings, *viz.*, two new relations R_2 and R_3, and the original relation R_1 has itself become one of the terms of a relation. Again, since R_2 is different from A and R_1, we similarly get two new relations, *viz.*, the relations in which R_2 stands to A and R_1. This process is infinite and yields an infinite series with terms all different from one another.

It is evident that only the first step of the argument need be considered, since it is this step which necessitates the others.

The presupposition of the argument is that if two somethings differ from one another, they must stand in relations which are different from either, or, more fully, in relations not identical with or included in the separate nature of either; that is to say, that if X is different from Y, there is a relation R_1 of X to Y which is not identical with either X or Y, or a part of what is already understood in X or Y.

Now this presupposition is not always true even where the two somethings are not a relation and one of its terms; it can, for instance, be shown to be untrue where the two somethings are a solid and its surface. But it is *never* true where the two somethings are respectively a relation and one of its terms.

For consider a case where A has a relation R_1 to B different both from A and from B, *e.g.*, where A is equal to B. What we have to do is to ask ourselves *what*, if there be such a thing at all, the relation of R_1 to A, *viz.*, R_2, must be. Mr. Bradley never raises this question but contents himself with speaking of this relation in general as existing. As soon as we ask ourselves this question, we detect a fallacy. For R_2, if there be such a relation, must be a new relation, though of course only discoverable from the given character of A and R_1. Hence the judgment 'R_2 is the relation of R_1 to A' must be a new judgment and not part of the original judgment 'R_1 is the relation of A to B'; and the question 'what is R_2?', *i.e.*, 'what is the relation of R_1 to A?' must be a real question, and must not merely present the verbal form of a question. An unreal question is a question which contains everything necessary to its own answer and which, therefore, puts as a question what cannot be a question to the person asking it, and so implies a contradiction between the verbal form and the matter to which it is applied. Now it is easy to see that in this case the question is unreal and that there is no new judgment. To do so we have only to consider what answers can be given to the question. The original judgment is 'A is equal to B', and the relation of A to B

would be said to be equality. The question, then, is 'what is the relation of this relation of equality to A?' Only two replies, differing in completeness, are possible: (1) We may reply that 'the relation of equality to A is that it (equality) is the relation of A to B,' or, more accurately, 'the kind of relation which A has to B'. Here equality is not the equality of A to B, but the universal of it, *i.e.*, equality in general; and the answer about the relation in which R_1 stands to A is simply a statement of what kind (*viz.*, R) the relation R_1 is. Thus we have not gone outside the nature of R_1 itself and not reached any new relation R_2. (2) We may give a more complete reply, which uses all the information given in the question. Speaking strictly, the relation of A to B is not equality in general but the particular instance of equality which is the equality of A to B. And if with this fact in view we ask what is the relation to A of A's equality to B, we can only reply that 'the relation to A of A's equality to B is that it is A's equality to B'. Thus here again we have not advanced beyond R_1 to any new relation R_2, nor have we advanced beyond the original judgment, *viz.*, that R_1 is the relation of A to B. It follows, therefore, that it is meaningless to speak of a relation R_2 of A to R_1 different from both.

From his conviction of the truth of mathematics, in which we advance step by step and by consideration of the special problem in hand, combined with an acute appreciation of differences of all kinds, there arose what may not unfairly be called the first principle of Cook Wilson's philosophy, the principle that there is no first principle. There is no doctrine of Aristotle with which he was more in agreement than that of the existence of *ἴδιαι ἀρχαί*. (Although his sympathies were with Plato, the cast of his mind and his aporematic methods showed that his real affinities lay with Aristotle.) He was never tired of insisting on the impossibility of general criteria; there was and could be no criterion of knowledge, no criterion of beauty, no criterion of morality. Aristotle was right in maintaining that *ἀγαθά* differed *ᾗ ἀγαθά*. The key to special problems lay in consideration of their special subject matter.[1] Doubtless general preliminary inquiries of a logical or metaphysical nature (*e.g.*, on the 'logic' of relations) were often necessary, but these were required to clear away

[1] The existence of God, he once argued in a paper, the delivery of which occupied nearly three hours, was not a matter of proof but was presupposed by the existence of the specific emotion of reverence.

obstacles likely to bar the way to proper appreciation of the problem.

On the other hand he would have repudiated the notion that the knowability of single facts by themselves or the existence of ultimate or irresolvable differences was inconsistent with the unity of reality; he would have argued that it only showed that reality had not that unity which some philosophers expected it to have, and that it was impossible to lay down *a priori* what the unity must be. In this connexion it may be noted that the modern metaphysical criticism of the view, implicit in ordinary thought and explicit in Aristotle and Locke, that what are called things or substances are complete and independent realities seemed to him to err by overstatement. It is true, he argued, that things, *i.e.*, bodies and minds, as standing in relations to one another, may be rightly held to be elements in a wider reality which would be the one absolutely independent reality and that these relations must be regarded as included in the complete being of these things; but, nevertheless, these things have a nature of their own, not at all constituted by these relations in which they stand to other things or substances and in fact presupposed by these relations; this nature of the things, therefore, is not constituted by their being elements in the larger unity to which their relations conduct. In this way, he thought, the true independence of the thing is vindicated against the overstatement of its dependence, and the ordinary view is shown not to be a mere fallacy.

From this attitude it was but a short, though important, step to the view which in one application or another was most characteristic of Cook Wilson in his later years, *viz.*, that much which is ultimate in our experience is in itself fully intelligible to us and that the difficulties which we feel about such realities only arise because we treat them as if they were, or try to express them in terms of, or try to explain them by, something else. To be intelligible is not the same as to be explicable. It is possible for a thing to be intelligible without being explicable, for it may be intelligible in itself and without reference to anything else; or, if the word explanation is to be retained, a thing may be its own explanation.

This view, he became convinced, holds good first and foremost in the case of knowledge itself; it applies also to space, to time, to the distinction of the discrete and the continuous, and to that of universal and particular, the difficulties about which, in the Parmenides and elsewhere, all arise from treating the universal as if it were another particular, as is

done in modern philosophy when it is maintained that there is a universal of universals.[1] It also applies, he thought, to various forms of unity. "A reality, whether a thing or not, may be a unity which unites in itself different aspects or elements; not something over and above them, which has them, but their unified existence. . . .

"The difficulty we raise about the notion of 'subject' [*sc.* of attributes] is really a difficulty about this unity, and we are puzzled merely because we think of the unity in the abstract. How a diversity can form a unity, or how a unity must be the unity of diverse elements in one whole, depends on the particular instance. Thus we see that a volume must have a surface, and that a surface can only exist as the surface of a volume, and it seems that we also see exactly what the nature of this unity is, and that no mysterious something outside the elements themselves is required to modify them."

Of the truth of such views he may not always have succeeded in convincing others, but he was certainly not prone to maintain of any particular thing that it was intelligible in itself without prolonged consideration. On such a matter he was no more hasty to commit himself than on anything else. Thus although for years he had given special thought to the subject of perception and seemed more and more convinced that perception should be included among such intelligibles, he would not definitely commit himself.

Probably it was his growing conviction that if the categories underlying our experience were to be understood, they must be understood through themselves, which gave rise to the chief characteristic of his last years, *viz.*, his insistence on the necessity of a full and patient analysis of what we exactly mean by such terms as mechanism, cause, force, life,[2] before we make any attempt to criticise our right to use such terms.

In his early days Cook Wilson accepted the idealism then dominant. "By the real or the objective," he maintained in a lecture dated 1880, "we can only mean that which is completely object of thought. But that which is object of thought must conform to every law of being an object of thought, that is to every law of thinking. Thus the laws of the nature

[1] Cook Wilson considered the modern representation of the individual as a universal because it is a unity in the diversity of its qualities 'a notable example of loose thinking'. His view was that the unity of the universal *in* its particulars is totally different from the unity of the individual as a unity *of* its attributes.

[2] Two of his notebooks are devoted to a minute analysis of what we mean by 'living thing'.

of the subject are the laws of the nature of the object. Therefore, whatever is necessary for our thought must be a universal objective truth, and therefore the antithesis between thought and its object is overcome."

It was long before he moved from this position. The considerations which seem eventually to have influenced him are given in a letter written in 1904. "In all investigation of knowing and willing there is a certain illusion to which we are liable. Whereas we have to do with the relation of subject and object, we try to express and explain various aspects of this relation in our ordinary categories which are all of the relation of object and object. The only remedy is to look into the nature of the thing before us *where we are certain of it* and see if it really admits of such categories. . . . If we think of knowing as an activity, as doing something, then as if we had to do with relations of objects we require a something to which something is done and a something in it which is done—in fact, as one object in causal activity produces a change in another object, we think that the knowing subject must in knowing do something to the object it knows and that that object must suffer something. Now we must know something about knowledge, and when we reflect we know that the very idea of it is incompatible with any such *action* upon, or *suffering* in, the object known. You can no more act upon the object in knowing than you can 'please the Dean and Chapter by stroking the dome of St. Paul's'. The man who first discovered that equable curvature meant equal distance from a point, did not suppose that he had 'produced' the truth—that absolutely contradicts the idea of truth—nor had he changed the nature of the circle or curvature or of the straight line or of anything spatial. Nor does any one else suppose so. Obviously if we 'do anything to' anything in knowing, it is not done to the object known. If we persist in trying to find something done to the object, we are simply using categories applicable to the relation of object to object, and not applicable to the relation of subject and object, and must fall into all manner of fallacies.

"Now representation is only another form of the same fallacy. We want to explain knowing an object and we explain it solely in terms of the object known, doing so by giving to the mind not the object but some idea of it which is said to be like it—an image (however the fact may be disguised). The chief fallacy of this is not so much the impossibility of knowing that the image is like the object or that there is any object at all, but that it assumes the very thing it is intended to explain. The image itself has still to

be *apprehended*, and the difficulty is only repeated. We still distinguish the image and the knowing, or perceiving, or apprehending, it. The theory which is to explain subjective apprehension of the object cannot, as one could predict, do anything but presuppose the absolute ultimate fact of apprehension of an object and so explain apprehension of the object (unconsciously) as apprehending another object like it. Obviously neither can apprehension be explained in terms of the object apprehended, nor the object in terms of apprehension. In a way the distinction is not only ultimate but of extreme simplicity—nothing can make it clearer than itself. It is 'simple' because we absolutely must always presuppose it to know anything or doubt anything or to think about our knowing anything. Perhaps most fallacies in the theory of knowledge are reduced to the primary one of trying to *explain* the nature of knowing or apprehending. We cannot *construct knowing*—the act of apprehending—out of any elements. I remember quite early in my philosophic reflection having an instinctive aversion to the very expression 'theory of knowledge'. I felt the words themselves suggested a fallacy — an utterly fallacious inquiry, though I was not anxious to proclaim it. I felt that if we don't know what knowledge is we know nothing and there can be no help for us. I feel sure many most respectable theories commit the fallacy of supposing that the presupposition of all explanation can be explained. What on earth is gained by 'construction' or 'reconstruction' over 'representation'? When you have made your construction you still have to *apprehend* it! It is no good—knowledge and apprehension can only be described in terms which already mean knowledge and apprehension. Is it not true that just as those who consciously or disguisedly hold a representative theory are leaving out apprehension altogether and substituting another object for it, so the idealist constructors or reconstructors are either leaving out the object and substituting for it the activity of perceiving it—this I think is their general tendency—or merely like the others constructing something which is an object but still requires apprehension: object on the one hand without apprehension, apprehension on the other hand without object?"

There is, however, no doubt that he only abandoned the current idealism with extreme hesitation, and without emphasis. At the date of the letter cited he still considered the view that idealism has an erroneous origin in the attempt to explain the relation of apprehension to what is apprehended to be compatible with the metaphysical view that the unity

of all reality, the unity of which every particular thing is a manifestation, is an apprehending unity. And for years he continued to hold that logic and science should be distinguished as dealing respectively with the subjective and with the objective side of thought. His hesitation seems to have been due partly to the conviction that it was first necessary to be satisfied about the nature of hypothetical thinking and partly to the fear that unless we maintain that what we apprehend is *part* of the apprehension, we find ourselves abstracting what we apprehend from the apprehension, and then the act of apprehension becomes empty and meaningless. Eventually, however, he overcame this fear by an analysis of the problem as regards relations generally. From this analysis certain sentences may be quoted. "We have, then, here [*sc.* in the case of a collision of two bodies A and B] a case where a relation, though empty and meaningless if we abstract from it the terms related, is so far from necessitating their inclusion in itself that it necessitates the contrary; for it necessitates that these terms must have a being of their own which is not included in the being of the relation. This seems enough to show that the inseparableness of the apprehension from what is apprehended does not warrant the conclusion which it seemed to suggest. The truth is that just as the collision with B is only possible through a being of B other than its coming into collision, and it is with B as having such being that the collision takes place, so also the apprehension of an object is only possible through a being of the object other than its being apprehended, and it is this being, no part itself of the apprehending thought, which is what is apprehended. Thus, if an object is apprehended, it does not follow that merely because it is apprehended it must be part of the nature of the apprehension, part of the apprehending consciousness, which would make it entirely mental or in general a state of consciousness."

The central feature of Cook Wilson's logical doctrine is best indicated through the criticism to which he latterly subjected the very existence of a 'theory of judgment'.

Every one is agreed, he held, that that with which logic, as distinct from other subjects, has to do is thinking, but apart from difficulties caused by idealism, this view involves the difficulty of determining what is and what is not to be included under 'thinking'. What is called thinking always has to do with knowing, but while some knowing, *viz.*, reasoning, must be called thinking, some knowing would not be called thinking; for perception, or at least some perception, is naturally called knowing. Again, while some thinking,

viz., reasoning, is knowing, some thinking is not. Thus the formation of opinion and of belief, though based on knowledge, is not knowing. *A fortiori* the activity of inquiring or wondering, although called thinking, is not knowing.

What is common to the forms of thinking is simply that they are activities of consciousness (in the wider sense of the word in which it does not mean consciousness of some object but includes willing and desiring), but these forms are *not* further unified under a differentiation of this universal into a definite specific form of activity of consciousness of which thinking would be the name; in other words, there can be no definition of thinking, since there is no common quality peculiar to the forms of thinking as thinking. What unifies the forms of thinking which are not knowing with those which are knowing and with one another lies in their several relations to knowing, relations depending in each case on the peculiar nature of the form of thinking in question, *sui generis*, and intelligible and only intelligible by considering the particular case. And it is solely through their relations to knowing—which is in itself intelligible—that the forms of thinking can be understood. Thus, wondering is wondering what is true, *i.e.*, what can be known about something. Further in explanation we cannot go, for the inquiring attitude is unique, cannot be expressed in terms of anything else, and is its own explanation.

The idea of logic as the study of thinking, therefore, leads us to apprehension in general as the primary subject of investigation. This will include that apprehension which is perceptive as well as that which is not, since the knowledge which wondering and the formation of opinion presuppose as desired may be such as has to be supplied by perception. Then will follow the other forms of thinking.

Unfortunately, however, logic has in fact taken quite a different direction, as is shown by the traditional division of the subject into the theory of judgment and the theory of inference. The idea of a theory of judgment originates thus: The study of inference, historically the first and chief centre of interest, at once leads to the idea of apprehensions not obtained by inference (since otherwise there would be an unending process). These apprehensions are called propositions or judgments, modern logic preferring the latter term because of the association of the former with the verbal statement. Now if the words 'proposition' and 'inference' were confined to such apprehensions, and if the theory of judgment meant the study of them as such, the division into the theory of judgment and the theory of inference would be justifiable

and would lead to the idea of a study of apprehension in general, whether inferential or not, as the first object of study, this study being preliminary to the study of inference. But the theory of judgment is not so conceived and the terminology is not so restricted. This comes about as follows:—

In any statement we must distinguish what it means from what it expresses, in an understood and restricted sense of 'express'. 'Glass is elastic' would often be said to be the *expression* of the knowledge or opinion of the person pronouncing it, but it does not *mean* anything about anybody's knowledge or opinion; it professes to describe an objective fact and that is its sole meaning. Now the knowledge gained by inference is stated in a verbal form which signifies the nature of the thing known and that only—not the nature of our apprehension of it. And the statement of the fact, omitting, as it often does, the grounds of it discovered in the inference, suppresses all traces of the process. This promotes the fallacious habit of representing the mental activity corresponding to it, *i.e.*, the apprehension of the fact, as a result distinct from the reasoning process by which the fact is apprehended. Hence arises the fiction of a kind of activity called judgment as something distinct from inference, whereas really if anything here is to be called judgment, it is precisely the inferring itself. Further, the fictitious sense of judgment is taken to include opinion and belief, since the verbal form used in expressing knowledge, opinion, and belief is the same and describes the nature of what we know or think existent, with complete abstraction of the fact that it is for us matter of knowledge, or of opinion, or of belief.

Three fallacies are thus involved in the familiar distinction between judgment and inference:—

(1) Knowledge, whether inferential or not, opinion, and belief are all regarded as forms of the same sort of activity.

(2) The term judgment, which has a quite legitimate meaning, is taken to designate this fictitious activity.

(3) This activity called judgment is held to be different from inference and is made the subject of a separate inquiry.

The confusion is concealed by the fact that the verbal expression is made to do duty for this fictitious activity, and what purports to be a logic of judgment is in fact, though quite unconsciously, only a logic of statement. Consequently in the so-called theory of judgment inquiry is sometimes directed to what the verbal form signifies and sometimes to the verbal form itself. In the former case the result consists

in abstractions which are metaphysical and not logical, as belonging to objective reality and not to our apprehension of it—*e.g.*, the distinction of subject and attribute in the treatment of the syllogism. ('No wonder,' Cook Wilson remarked, 'that in some modern philosophies logic is indistinguishable from metaphysic.') In the latter case we find (1) abstractions which belong to grammar, associated with logical and metaphysical abstractions, *e.g.*, in the theory of the connotation and denotation of terms, and (2) fallacies such as the view that all universal propositions are hypothetical, due to failure to see that the questions under consideration are purely questions of the meaning of certain forms of speech.

There is a further defect in representing what is really a study of the general forms of statement as a theory of 'judgment'. The word 'judgment,' being taken from ordinary usage, ought in logic to retain what is essential in its ordinary meaning. To judge is to decide; it implies previous indecision, a previous thinking process in which we are in doubt. 'Judgment,' then, in logic should mean decision on evidence after deliberation. Consequently it is not merely that opinion and belief are not entitled to be called judgment; the term judgment should not even be used as a general term to cover those of the activities of thinking which are apprehension or knowledge. For in perception there are many apprehensions, often in logic called judgments, which involve no previous doubt, as when, if I see black letters on white, I apprehend that the letters are black and the paper white.

The moral which anyone trying to follow Cook Wilson's thought would have expected, and indeed desired, him to draw, is surely that the whole structure of logic should be recast, the 'theory of judgment' being abolished, both name and thing. We should have expected an analysis, first of the various forms of knowledge, and then of the inferior activities of thinking such as the formation of opinion and belief, exhibited in relation to knowledge and to one another; and the term judgment would appear (if at all) only as a name for one particular form of apprehension, *viz.*, that which is judgment in its ordinary sense. In this way we might hope to get a logic in vital relation to the facts, freed from technical terms, and, above all, freed from the fallacies inherent in the supposed existence of a 'theory of judgment'.

Yet we find no such recasting, but instead only a discussion of the usual topics covered by the so-called 'theory of judgment,' based on the full recognition that they constitute only a logic of statement. Probably the re-orientation came too late for Cook Wilson to effect the necessary changes, but

possibly also he would have justified the retention of the ordinary structure of the subject on the ground that as the forms of statement were common to the various forms of thinking, it was only possible to approach the latter through the former.

Of his views in detail it is only possible to select characteristic specimens[1]:—

(1) Opinion involves reasoning. In opinion we know that certain facts are in favour of A's being B, and either at least that they do not prove it, or that there are facts against A's being B. The opinion itself, however, is not the knowing which constitutes the estimate of the evidence but the result of it, and is a peculiar thing for which we can use no term which belongs to knowing.

Belief is not judgment, for, like opinion, belief involves uncertainty, so that the belief that A is B is not the decision that A is B, although it may involve the practical decision to *act* as if A were B. Belief, rather, is akin to opinion, and the difference, which appears to be one of degree, is not one of superior certainty, for certainty does not admit of degrees. In general we risk more on a belief rather than on an opinion; yet when we believe that A is B, although we may take the practical decision to act as if it were true in a certain practical issue, we should refrain from taking other practical decisions which we should take if we *knew* that A is B. Corresponding to these different degrees of practical importance in our decisions in the case of different opinions and beliefs, there is a varying degree of feeling of confidence. This is *sui generis*, and we are recognising its true positive nature by thus distinguishing it from that with which it might be confounded. Such confidence is not an attitude which we take towards what we know. To a high degree of it, where it exists, is attached the word belief. It is an ultimate and irreducible feeling, frequently influenced by our wishes or fears.

With this feeling of confidence is associated a fallacy often illustrated in the treatment of probability by its mathematical measure, and in argument from statistics. The feeling depends in part at least on what we call the strength of the evidence. But evidence, however strong, cannot influence reality, and in the feeling of increased confidence which accompanies increased strength of the evidence we are unconsciously treating the strength of the evidence as if it could influence reality.

[1] It is impossible in the space available to give a fair idea of his view on hypothetical thinking, a subject to which he devoted a special course of lectures.

(2) As to error, the existence of deception and mistake, and therefore of error proper, is not provided for by the existence of opinion. For, although an opinion may be untrue, the holder of a false opinion is not, strictly speaking, deceived or mistaken. On the other hand, the hypothesis that there can be false judgment, in the proper sense of 'judgment,' is untenable, since it would involve that we never could be sure, as we are sure, that any 'demonstration' was knowledge. Error, however, *i.e.*, deception in the full sense, does exist. The clue to the difficulty lies in the existence of certain forms of consciousness which simulate judgment. Thus, to illustrate one of these forms, we may see a person whom, as we say, 'we mistake for an acquaintance,' and without hesitation perform some act which it would be a liberty to take with anyone but an acquaintance. Here the term 'perception' is excluded, and so also are the terms 'judgment,' 'opinion,' and 'belief,' since when we perceive the familiar characteristics of our friend, it never enters into our heads that they could belong to anyone else—we do not think about that at all. The most adequate expression for our attitude is that 'we were under the impression that the person we saw was our friend'. The fact is that such an attitude eludes our efforts to express its character, because it is not clear thinking, and thus not an activity of the fully-awakened consciousness, and yet we try to express it as if it were. It can only be expressed in terms peculiar to itself.

(3) With regard to the relation of conception to judgment, it is true that the judgment,[1] in which, as such, we apprehend a unity of different elements of reality, is the unit of thought. For an element of reality which is simple, in the sense that elements cannot be distinguished within it of which it is the unity, is at the same time *in its own nature* related to other elements and must therefore be apprehended as an element in a whole, *i.e.*, as an element apprehended in a judgment. Nevertheless, we can make a legitimate distinction analogous to the ordinary usage of the terms 'conception' and 'judgment,' by calling apprehensions of such simple elements conceptions, in distinction from judgments as the apprehensions of what is complex—provided we remember that the former apprehensions are only possible as elements in the latter. These conceptions, sometimes called simple conceptions, are true in the same sense as judgments are true. For the simple conceptions which are said to be abstracted from

[1] The section of the lectures from which this paragraph is summarised was written prior to Cook Wilson's final strictures on the use of the term 'judgment'.

experience, *e.g.*, the conception of colour, are apprehensions in experience of reality. On the other hand, those simple conceptions, like that of cause or necessity, which are said not to be given in experience, although they are not apprehensions of something experienced, are apprehensions of what is necessitated by the reality which is apprehended in experience, and therefore of what must itself be real as belonging to the reality apprehended in experience.

We incline to treat the latter or *a priori* conceptions, since their objects are not themselves experienced, as primarily necessities of thought, and then find it difficult to explain why there should be a corresponding object in experience. But such apprehensions are not so much necessary apprehensions as apprehensions of a necessity, this being all that a necessary apprehension should mean, and the use of the term '*a priori*' here, although it has some justification, is misleading, since it implies a divorce between experience and thought which cannot be overcome.

(4) The use of the terms subject and predicate has been the source of serious confusion in logic. The distinction implicit in the usual definition of the terms is that the subject of a statement is the object of which we were thinking as known or conceived before the information given about it in the statement, while the predicate is the being asserted in the statement to belong to the object but not comprised in what before the statement was conceived to belong to the object. Although here subject and predicate are objects, yet this distinction is entirely founded on our apprehension of them ; it lies not in their objective nature but solely in their relation to our subjective attitude of apprehension or opinion. This distinction finds no expression in the statement itself, since it forms no part of the meaning of the words, and it is only indicated by the accent placed on certain words when the statement is spoken.

With this distinction is habitually confused the distinction between A and B in the form 'A is B,' to which it is held all statements should be reduced and to which corresponds the objective distinction between subject and attribute. This is especially manifest in the usual treatment of the theory of the syllogism. This distinction of subject and predicate is also confused with an objective relation in the language often used about the relation of universal and particular, as when it is said that Plato's problem in his theory of ideas was to account for the predication of the universal (which is one) of many particulars.

(5) Inference is a way of judging or forming an opinion.

In that inference which is certain and constitutes knowledge (through which the imperfect types have to be understood) we apprehend that one element of reality (which may be simple or complex) necessitates another. (Kant's synthetic judgments *a priori*, though not called inferences, are similar to such inferences.) The possibility of such necessitation can be understood only in particular instances and admits of no general account.

The object of the syllogistic logic was to discover the general forms of demonstrative argument. To achieve this object in its generality, its authors worked out the kinds of argument depending on what they considered the mere form of the propositions constituting the premises, and so applicable to any kind of subject-matter. Consequently they only formulated the kinds of argument possible within the category of 'subject' and 'predicate,' *i.e.*, really, of subject and attribute. Their method was not one of analysis of actual arguments but was *a priori* and constructive, and in fact exactly parallel to the procedure of a mathematical science; and the resulting determination of the rules and figures of the syllogism is no part of logic proper but a science, in the sense in which pure mathematics is a science; and deals with the relations of subject and attribute.

In geometry advance always presupposes the drawing or imagining of a particular figure, and consists in making new constructions of which, and of the consequences of which, we immediately apprehend the validity. When the right construction is found the proof is complete. The addition of a chain of argument such as we find in Euclid is unnecessary; and though it enables us to expound the proof to others, the best way to do this is to retrace the process of discovery. The apprehension of an axiom differs from a demonstration only in the greater simplicity of the construction.

Cook Wilson also used to subject to a searching examination Mr. Bradley's theory of judgment. The argument is too long and complicated for reproduction, but in outline his main contentions were as follows:—

(1) Both the distinction between the 'psychological idea,' *i.e.*, a mental image, *e.g.*, of a particular horse, and the 'logical idea,' or 'ideal content,' *e.g.*, horseness, which is held to be the 'meaning' of the 'psychological idea,' and also the theory built upon this distinction, depend on an erroneous analysis of such terms as 'sign,' 'symbol,' and 'meaning'.

(2) Mr. Bradley's account of 'sign' and 'meaning' really describes an act of abstraction, and has nothing to do with sign or meaning.

(3) By 'ideal content' or 'logical idea' can only be meant either the reality meant by the 'psychological idea,' *e.g.*, horseness, or, if an 'ideal' meaning *has* to be found for it, the meaningness of the psychological idea, *i.e.*, its property of having a meaning.

(4) In Mr. Bradley's definition of judgment as the act which refers an ideal content recognised as such to a reality beyond the act, 'refer' must in the end simply mean 'judge'. Further, in this definition, if 'ideal content' means the reality meant, then the definition only amounts to saying that in the judgment 'A is B' we judge that the reality A has the reality B-ness; while, if 'ideal content' is taken in the other sense in order to preserve the 'ideal' character of ideal content, as somehow distinguished from reality, the definition is obviously untrue.

(5) The theory is grounded on the same principle as the old-fashioned copying idea theory, which dates from Aristotle, *viz.*, that it is our ideas which are true or false, according as they do or do not agree with, *i.e.*, copy, reality, and judgment is true or false because it somehow involves ideas. Mr. Bradley in effect substitutes 'meaning' for 'copying,' by an impossible use of 'meaning'—an idea 'standing for' or 'meaning' existence. But, apart from the new difficulties introduced by the change, the new theory does not even avoid the fundamental difficulty inherent in the old theory, *viz.*, that the possession of an idea is useless unless we know it to be like the reality, and that to know this we must already know the reality and so have no need of the idea. For in just the same way the fact that the 'psychological idea' stands for a reality is useless unless we know this fact, and to know this we must already know the reality and so have no need of the 'meaning idea'.

No summary could do justice to Cook Wilson. Certainly this summary does not. Even his notebooks would, to those who did not know him, give but an inadequate idea of the amount of thought which lay behind even the simplest and most obvious looking of his statements. Those who knew him will probably agree that his outstanding characteristic was his power of going to the root of a matter—a power which in criticism showed itself in the way in which, by concentrating on essentials and especially on the main presuppositions of a view, he would in a few sentences develop objections, which, if valid at all, destroyed the whole position. For his friends the dominant feeling will be regret that it was only towards the close of his life that he really seemed to find himself, and that then it was too late.

IV.—ON THE NATURE OF JUDGMENT.

By Dorothy Wrinch.

In putting forward this theory of judgment, my aim is not to offer criticism of Mr. Russell's theory of judgment, nor yet to estimate its plausibility ; I rather wish to offer suggestions as to the ways in which his idea for dealing with judgments of the form "aRb" can be extended so as to enable us to deal with more complicated judgments. Although I shall not be able to claim that I have dealt exhaustively with the various developments of which the idea that judgment is a multiple relation is capable—I shall try, at any rate, to refer to the various classes of possibilities which suggest themselves. I shall not attempt in this paper to give any answer to the question as to the truth of the theory : I am only going to try to show how it might be made to work. Whether or not the theory can be made to work (quite apart from whether or not the theory is true), depends, I hope to show, on various rather obscure questions. I shall content myself with showing that the answers given to these questions do determine the workableness of the theory, and I shall not attempt at present to investigate the answers to them in any serious spirit.

But, in case, some may feel that the propositional theory of judgment as a dual relation is fairly satisfactory, and that any other theory is so far unnecessary and without interest, may I suggest that in making up a theory to fit certain facts, if all the relevant facts are included, then there are none left by means of which one can judge between different theories, each of which fits in with all the given facts. There is no reason, I think, to believe that there is only one theory which can satisfactorily account for a certain group of facts. In view of this, it seems to me of interest to investigate how far this theory of judgment could be made satisfactory even if one is satisfied to some extent with some other theory, though one's unsatisfied desire if no suitable theory of judgment has been found would doubtless lend a stronger interest to this inquiry.

This theory is very complicated—and I must confess this at the outset, but may I put in a plea that it may not be regarded merely for that reason, as unsuitable? It is quite conceivable that judgment is a very complicated phenomenon, and I must insist on the fact that the simplicity of a system is no important ground in its favour.

I will pass over the various arguments which may be brought up against the propositional theory of judgment. Arguments are adduced in Mr Russell's essay in which he introduces his theory.

First of all we will consider the theory that judgment is a multiple relation in the case of simple judgments such as "a loves b,"

"$\phi(ab)$".

The theory is that the belief complex in this case is of the form

1·1 "$\mathrm{J}(\mathrm{I}, \phi, a, b)$".

If we had more arguments as, for example, in the judgment "a is between b and c" we should have "$\mathrm{J}(\mathrm{I}, \phi, a, b, c)$," and generally "$\mathrm{J}(\mathrm{I}, \phi, a_1, a_2, a_3 \ldots a_n)$". Now I must state explicitly that this relation J is such that the arguments cannot be interchanged freely. In general "$\mathrm{J}(\mathrm{I}, \phi, a, b)$" does not imply "$\mathrm{J}(\mathrm{I}, \phi, b, a)$". I put in this very obvious point because the criticism is sometimes advanced that on this theory "I believe that a loves b" cannot be distinguished from "I believe that b loves a". J is in a perfectly precise sense not symmetrical: thus we can clearly distinguish

"I believe that a loves b," *i.e.*, "$\mathrm{J}(\mathrm{I}, \phi, a, b)$"

from

"I believe that b loves a," *i.e.*, "$\mathrm{J}(\mathrm{I}, \phi, b, a)$".

We can now treat molecular propositions and propositions such as $p \supset q$, $p \vee q$, $p.q$, *etc.*,[1] but I will confine myself to those molecular propositions whose constituent propositions are elementary propositions, *i.e.*, propositions with no apparent variables. Suppose we take "If he comes, I will go," *i.e.*, "$\phi a \supset \psi b$". Trying an extension of the method for treating ϕa we will put

2·1 "$\mathrm{J}(\mathrm{I}, \phi, a, \psi, b)$".

This very obviously is unsatisfactory for "he comes or I will go" would be equally well represented. Now a problem faces us—we cannot have the proposition as a unity; not even ϕa nor ψb may come in. Yet we must be able to distinguish ways of combining the constituents ϕ, a, ψ, b. My

[1] *I.e.*, p implies q, p or q, p and q, *etc.*

first suggestion is that the *form* of the proposition be introduced.

A form seems to be an expression with blank spaces. Each of the spaces is guarded by one type so that only arguments of certain types can be put in certain spaces. Thus we have, *e.g.*, "— — —" or "$x\mathrm{R}y$". Now there are various ways of *operating* on forms. The easiest is to put constants into the empty places. Thus we could fill up "— — —" into "a loves b". This process I call the process of evaluating and the operator by which one evaluates a form an evaluator. Thus, if $f(xy)$ represents a form and $\chi(ab)$, *e.g.*, the proposition "a is greater than b"

$$\underset{\substack{x=a\\y=b\\f=\chi}}{\mathrm{E}'} f(xy) = \chi(ab).$$

Now returning to our problem of expressing the judgment that

$$"\phi a \supset \psi b"$$

we have

$$\phi a \supset \psi b = \underset{\substack{x=a\\y=b}}{\mathrm{E}} \; \underset{\substack{f=\phi\\g=\psi}}{'} \; fx \supset gy$$

Thus we can take as the judgment complex

2·2 $$"\mathrm{J}(\mathrm{I}, \underset{\substack{x=a\\y=b}}{\mathrm{E}}, \underset{\substack{f=\phi\\g=\psi}}{'} fx \supset gx)".$$

One further elaboration I want to suggest, *viz.*,

2·3 $$"\mathrm{J}(\mathrm{I}, \underset{\substack{x=a\\y=b}}{\mathrm{E}}, \underset{\substack{f=\phi\\g=\psi}}{} fx \supset gy, \phi, a, \psi, b)".$$

Between 2·2 and 2·3 I have no arguments to offer. There is, however, one consideration. Sometimes one feels a desire for uniformity in the various parts of a theory, and it may seem more suitable that the simple propositions $\phi(ab)$ should have a uniform form with molecular propositions. In that case, I put forward to supplement 1·1

2·2 "$\mathrm{J}(\mathrm{I}, \underset{\substack{x=a\\y=b\\f=\phi}}{\mathrm{E}}, f(xy))$," 1·3 "$\mathrm{J}(\mathrm{I}, \underset{\substack{x=a\\y=b\\f=\phi}}{\mathrm{E}}, fxy, \phi, a, b)$."

2·3

Then, again, I have no arguments between these two possibilities. This argument of uniformity has, I think, little cogency, and I therefore offer these modifications very tentatively.

Now I wish to suggest a way of treating apparent variable propositions with this theory. Apparent variable propositions are such propositions as

"There is a man walking down the street."

"All boys like sweets."

"There is not one poet whom everybody admires."

We will take the easiest case.

"Someone is ill."

We will try to get the complex as before

3·1 $\quad J(I, \phi)$

Now this does not distinguish "Someone is ill" from

$$"(x) . \phi x"$$

"Everybody is ill".

I therefore wish to introduce another operator. I call it P and the operation may be called that of "particularising" a form. Correlative to P we introduce G which performs the operation of "generalising"

Then

$G^c\phi x = (x) . \phi x =$ for every x, ϕx is true.

$P^c\phi x = (\exists x) . \phi x =$ there is some x, for which ϕx is true.

P and G can operate on forms or on partially completed forms, but obviously not on completed forms which are, of course, propositions. Thus we can take

$$(\exists x) . \phi x = \underset{x}{P}{}^c\phi x \text{ or } \underset{x\ f=\phi}{PE}{}^c\ fx.$$

Further possibilities for the belief complex now suggest themselves

3·2 $\quad$ "$J(I, P_x, \phi x)$"

3·3 $\quad$ "$J(I, \underset{f=\phi}{P_xE}, fx)$"

3·4 $\quad$ "$J(I, \underset{f=\phi}{P_xE}, fx, \phi)$".

Between these I again have no arguments to offer. Again the argument of simplicity might perhaps be introduced in favour of $J(I, P_x, \phi x)$ or the desire for uniformity might lead one to adapt the form of the complex to the one decided on in case 2.

We will now take a slightly more complicated judgment involving apparent variables. "There is something to the right of b"

$$(\exists x) . \phi(xb).$$

We will again try various forms. It is clear that the proposition is of the form

$$\underset{x}{P^c}\phi(xb) \text{ or } \underset{x\ f=\phi}{\underset{y=b}{PE}}{}^c\ f(xy)$$

We therefore try

4·1 $\quad$ "$J(I, P, \phi, b)$"

4·2 $\quad$ "$J(I, P_x, \phi(xb))$"

4·3 $\quad$ "$J(I, \underset{x\ f=\phi}{\underset{y=b}{PE}}, f(xy))$"

4·4 $\quad$ "$J(I, \underset{f=\phi}{\underset{y=b}{P_xE}}, f(xy), \phi, b)$".

Now suppose we try to express the judgment complex for $(\exists x) . \phi(xb)$, the first form will not differentiate it and so is clearly unsatisfactory, and, once again, there seem to me no arguments except those of simplicity and uniformity to help one to decide between 4·2, 4·3, and 4·4.

I will take one more example, to show how one seems to be forced to introduce the form of the proposition into the judgment complex. Take the judgment "there is someone who is ill and sad"

$$(\exists x) . \phi x . \psi x = \mathrm{P}_x{}^c \phi x . \psi x$$
$$= \mathrm{PE}^c_{\substack{x\, f = \phi \\ g = \psi}} fx . gx$$

so as the complex we will consider

5·1 "J(I, P_x, ϕ, ψ)"

5·2 "J(I, P_x, $\phi x . \psi x$)"

5·3 "J(I, $\mathrm{P}\,\mathrm{E}_{\substack{f=\phi \\ g=\psi}}$, $fx . gx$)"

5·4 "J(1, $\mathrm{P}_x\mathrm{E}_{\substack{f=\phi \\ g=\psi}}$, $fx . gx$, ϕ, ψ)".

The first is unsuitable on the face of it, for $(\exists x) . \phi x \supset \psi x$ would be the same. We are then left with three alternatives as before.

But here, I must remark that it might be possible to introduce still further operators to distinguish the logical product of $\exists x . \phi x . \psi x$ from the implication. But, this possibility I will not discuss, except to say that it might work in such a simple judgment as this. I will therefore put in the possibility

6·1 "J(I, H_P, ϕ, ψ)" for "$(\exists x) . \phi x . \psi x$"

as a typical instance of how possibly the form may be deleted.

Having given the bare outlines of the theory, I will now try to show on what questions it depends, whether my suggestions are workable. I must point out again that in the simple cases of elementary propositions discussed by Mr. Russell, the question of the introduction of the form does not assume the importance it has assumed in my extension of the theory, and since it is round this question of the introduction of the form that most of the important criticism centres, it is my extension of the theory rather than Mr. Russell's theory that is in question, although a development such as I have suggested seems to me inevitable if one begins with the idea of judgment as a multiple relation.

Now an essential part of the theory rests on the possibility of correlating certain spaces with one evaluation or with one particularisation or generalisation. For take the forms

"$fx \,.\, gy \,.\, x\mathrm{H}y$"
"$fx \,.\, gy \,.\, y\mathrm{H}x$".

These are different. One would give us, after certain operations "There is a rose to the left of a daisy," *i.e.*,

"$(\exists x, y) \,.\, \phi x \,.\, \psi y \,.\, x\mathrm{L}y$,"

the other, for example, might give "There is a rose which has a daisy to the left of it," *i.e.*, "$(\exists x, y) \,.\, \phi x \,.\, \psi x \,.\, y\mathrm{L}x$". Thus we must be able to correlate the spaces together in different ways, if the employment of a form is to be at all possible. The question whether such a correlation is justified is a different question, and as it appears to me a difficult and obscure one. But the fact remains that such a procedure is essential to the theory. Having pointed out this question, and having shown that it is necessary for my purposes that this procedure should be justified, I leave the further discussion of the point.

However a larger, less subtle but more dangerous objection can be raised. In introducing the form as a unity in the judgment complex—as is done in some of the suggestions, is one not perhaps falling into the very same mistake—if it be a mistake—of imagining that propositions are unities? Is there any justification for introducing a form, which embodies the logical structure of the proposition, when one has refused to introduce the proposition as a unity? I feel that this objection must be taken seriously. It is, however, difficult to find any arguments to bring up against it, or for that matter, to bring up to support it. It might be thought that something could be said with regard to the fact; *e.g.*, there is a fact of this structural form and therefore the form is in a sense a unity; but that is no answer whatever—for the difficult case is the case in which the judgment is false and then there is no fact. It would be a matter of little difficulty to get out a large class of theories of judgment, if judgments were all true. Thus no answer can be given to this objection by reference to the fact. I am at a loss to know what to advance in favour of the introduction of a form when this objection is brought up. I can only suggest that a form is a very colourless thing indeed. It is a few blank spaces with a bare logical structure uniting them: and I feel that the kind of way in which it is a unity does not in the least imply any propositional unity. All that is implied is that it is so constructed that if we operate on it, we shall not get nonsense; the existence of the types belonging to each space will make that impossible. And this is an interesting point because it has been advanced as a criticism that on this theory it is possible to judge nonsense. Of course it is

essential for any theory of judgment that such a thing should be impossible. When it is explicitly stated that there is a type belonging to every blank in the form, it will be clear that it is impossible on this theory to judge nonsense—at least when the form is introduced. In the case considered at the beginning where there is no form to regulate the types of constituents, the difficulty can be got over by simply stating it as a property of judging relations that the types of the constituents do not form an independent set.

Thus when we have "J(I, —, *a*, *b*)" the nature of J as a judging relation makes the type of suitable arguments for the empty place automatically determinate, and gives it in terms of the types of I, *a*, *b*. In this way, I feel such a criticism can be disposed of satisfactorily. This has been done partly by making explicit the part played by types in forms. This seems to help one too in answering the objection referred to above—that the introduction of the form as a unity is unjustified, if the proposition itself is not a unity. But, of course, I have not adduced any important considerations which in any way dispose of this criticism, and this criticism must, therefore, be taken into account when we sum up the results of our inquiry.

Another criticism can be advanced and has been advanced against Mr. Russell's theory. In a judgment, it is thought that the verb of the proposition must function as a verb and not as an ordinary constituent. Now there is a definite point in this criticism, and in bringing forward any theory of judgment the verb of the proposition must either function in a special way or some answer must be made to this criticism. In the propositional theory of judgment the verb functions in a special way. But in this theory the verb of the proposition does not function in a special way. And so an answer to the objection must be attempted; but I think I have a satisfactory answer to make to the criticism. It seems to me that the feeling that it has any cogency as an argument is due to a lingering belief in the unity of propositions. It seems to me that it is only as a deduction from the assumption that propositions are unities that one can hold that the verb must function in a peculiar way. Functioning as a verb and not as an ordinary constituent means, it appears, acting as a binder. Acting as a binder of certain constituents means making them a unity. Thus the criticism seems to be reducible to the criticism that the verb binds the elements of the proposition together into a unity. Thus this criticism though it appears to be an objection to the theory and not merely to the assumption on which it is built, *viz.*,

that propositions are not unities, is really an objection to our initial assumption, and therefore will not be dealt with here.

I must add a few remarks with regard to the part played by the form in my theory. All the way along I have suggested analyses of the belief complex which do not involve the form. In the case of very simple judgments, the analysis of the belief without a form was considered satisfactory, but in the more complicated judgments it was found necessary on my theory to allow the form a place in the analysis of the belief complex. Now the operators P and G, though they were designed to act on forms, as in the case of 2·2, 2·3, 3·2, 3·3 and 3·4, can possibly be used so as to operate between two concepts: for example, we may perhaps have

$$(\exists x) \,.\, \phi x \,.\, \psi x = \mathrm{P}_{x^c}\, \phi, \psi.$$

Now in such a usage it is clear that there will have to be several modifications of my original operators P and G, and we shall possibly get P_{A}, P_{O}, H_{P} as operators on ϕ and ψ to give $(\exists x) \,.\, \phi x \,.\, \psi x$; $(\exists x) \,.\, \phi x \vee \psi x$; $(\exists x) \,.\, \phi x \supset \psi x$ respectively. In this way, we can get operators on terms, concepts and particulars such that any proposition can be obtained by using certain operators on certain terms. We shall get, for instance, formal implication expressed neatly in the form

$$\mathrm{G}_{\mathrm{H}^c}\, \phi, \psi.$$

And it may be possible to get operators so introduced that the form can be cut out of our belief complex, and we shall merely have a general form

"J(I, (GPE . .), ϕ, ψ . . .)."

And in putting this forward I want to meet at once a very obvious criticism. At first sight one is amazed at and disturbed by the number of operators, and one feels, instinctively, perhaps that a theory which requires such a complicated apparatus simply will not do. But I think one must fight against this feeling bearing this point in mind. Propositions on the usual theory when they have two or more constituents are exceedingly complicated structures. A proposition about two concepts and a relation "*cat*" and a "*dog*" and "*being near*," for example, can have a large number of different structures. Thus one may have "There is a cat near a dog," "All cats are near some dog," "There is a dog near no cat," and so on. We get a large variety of logical structures. Now my operators merely attempt to put the peculiarities of each form together so that different operators and combinations of operators acting on one set of terms produce different propositions. Thus the complexity of these groups of operators is due to the complexity of the propositions them-

selves, and for that we cannot be held responsible. Any theory of propositions must allow for the complexity of propositions, and so I am not really introducing in any way a more complicated kind of theory than it is absolutely necessary to have.

I hope I have now shown that this extension of the theory that judgment is a multiple relation from the case of simple relational propositions to apparent variable propositions does not depend essentially on the form being introduced. It has been my object to give a class of theories all of them extending the original idea—so that each can choose for himself between the theory which introduces the form or on the other hand the theory which cuts it out. Thus, if an attack is made on the "*form*" theory, if there is sufficient reason one will let it go without a qualm. If on the other hand the theory substituting further operators beyond the P and G proves untenable, still the stronghold of the theory remains unchallenged. These two are but obvious modifications of a general notion which characterises the class of theories advanced. The essential, the only essential point about the matter is the introduction of *operators*. If those are disposed of, the theory is lost. But, I feel that their introduction is not only justified, but in some way enlightening to the whole subject. Once introduced, they become relevant at all kinds of points in epistemology, and the idea which prompted their introduction can be extended.

A new treatment of attitudes to propositions such as desiring, wishing, fearing, and so on, can probably be given by means of more operators. Their use, seems to me, to offer an escape from the dilemma which confronts us when on the one side we must admit that there is some element in common in such mental events as, "I believe *p*," "I hope *p*," "I fear *p*," "I desire *p*," and on the other hand we feel for more or less weighty reasons that propositions are not entities. I have put in these possibly irrelevant considerations and hints as to the kind of part operators might conceivably play in a theory of knowledge in order to put them forward for consideration. The mere fact that the idea seems fruitful in such vexed questions as the connexion of inference and implication, tends, it seems to me, to commend the whole notion to one's notice, and I hope that owing to this a more sympathetic consideration will be given to it than one's dislike of its complexity and technicality would prompt one to give.

I will now sum up the results of our enquiry. We have considered the simpler kinds of judgments and have offered

various suggestions in each case as to the form of the corresponding judgment complex. We have been able to adduce no important considerations which enable us to decide between the three or sometimes four alternatives which seemed satisfactory with each kind of proposition considered—it seemed that only very weak arguments, such as the argument from simplicity or the argument for uniformity, were possible ones to use, and those were of such doubtful validity and of so little weight that we did not seriously consider them. In this way we had several alternative forms left in our hands. The two large classes into which the class of theories put forward can usefully be divided seem to be the cases in which P and G and E are introduced and the form and those cases in which we have managed to cut out the form. It would therefore be exceedingly interesting if arguments which would enable us to decide between these two classes could be adduced. But this seems to be difficult.

Finally we considered all the objections to the theories which suggested themselves. We considered the objection brought forward by many people that the verb of the proposition must play a part in the judgment complex, different from that played by other constituents, and we venture to think it was due to some remaining vestige of belief in the completeness of propositions. Our enquiry into the difficulty as to correlating the spaces in the form and a whole group of difficulties centering round the employment of *forms* had to be left in an unfinished state, owing to the obscurity round the whole question of the nature of forms. The criticism as to the possibility of judging nonsense we were able to dispose of by a careful statement as to the relations between the types of the constituents of a judgment complex. But with regard to the criticism that in allowing the form, one was tending towards assuming that propositions are themselves unities, although we did not really feel any great weight in the argument, it was not found possible to bring up any counter arguments and the objection must therefore stand for further consideration.

The considerations suggested in this paper have all the way through been put forward in a very tentative way. My attitude has rather been that judgment may or may not be a multiple relation, but if it is, it must in the more complicated cases be extended in some such way as I have suggested. I wished therefore to point out what questions one must be prepared to answer if one is going to adopt the theory that belief is a multiple relation rather than to look into the question as to how far the whole theory is a true one. If it is to be

worked, this would seem to be how it is to be done. I have tried to point out the difficulties of the question. We must next proceed to give estimates as to the weight of the objections brought up and to decide as to the truth of the theory.

V.—DISCUSSIONS.

THE "CORRESPONDENCE-NOTION" OF TRUTH.

In the January MIND (No. 109, pp. 66-74), Mr. A. K. Rogers pleads for a fresh consideration of the "correspondence-notion" of truth. He is "inclined," he tells us, "to be sympathetic toward the notion," and he argues at some length that the discussion of "correspondence" in my *Essay on the Nature of Truth* betrays misunderstanding or misrepresentation of the theory. Whilst disclaiming any attempt to offer "a positive defence of the doctrine," he gives a brief account of the "correspondence-notion," as he understands it, together with an analysis of "the part that the mind plays in correspondence"; and, with regard to this analysis, he says (p. 74) "I only claim that it is perfectly intelligible in itself,[1] and that it avoids all the ambiguities of Mr. Joachim's account".

With all due deference to Mr. Rogers, I must say frankly that I do not agree with his interpretation of my discussion of "correspondence". I think—if I may say so without discourtesy—that in many important respects he has failed to understand what he is criticising. This is, however, a matter of no great moment, except possibly to Mr. Rogers and myself, and I do not propose to reply in detail to his criticisms. I am quite content to leave the issue to the decision of any careful reader who will take the trouble to compare my discussion with the interpretation offered by Mr. Rogers.

But the account which Mr. Rogers himself gives of the "correspondence-theory" seems to me so far from being "perfectly intelligible in itself"—seems, indeed, to put it bluntly, so confused and untenable—that I feel moved to examine it in some detail, in case no other reader of MIND should take the matter up.

§ 1. "The essence of the correspondence-theory" is set out briefly on p. 67; and a fuller analysis is given on p. 74, where "the part that the mind plays in correspondence" is taken into account. In the first passage we are told that the theory "presupposes two main theses. The first is, that in 'truth' there is always a duality involved; on the one hand 'ideas,' and on the other a reality which is existentially different from the ideas, and known only through them as a medium. And in the second place,

[1] If the theory, as expounded by Mr. Rogers, is "perfectly intelligible in itself," what need is there for any "further effort . . . to defend" it? But the reader will probably agree with me that Mr. Rogers is "only" claiming a great deal.

it holds that if we are to know the nature of this reality 'truly,' it must in so far correspond to our ideas of it." An example is added, from which it appears that "the nature of the reality," if it is to be known, must "correspond" to my ideas of it in the sense that it "must somehow be reproduced or duplicated" in them.

With this statement I have no desire to quarrel. But I would call the reader's attention to the important admission that the reality is "known only through" the ideas "as a medium"—an admission which is, I think, both necessary and fatal to the theory of truth as correspondence; and I would urge upon Mr. Rogers that, since it really is not possible to *know* anything 'falsely,' the word 'truly' (in his formulation of the second main thesis) is—to say the least—redundant.

§ 2. The trouble begins when Mr. Rogers attempts to explain these "two main theses" more precisely. With regard to *the second thesis*, we find him maintaining that "resemblance is all that the 'correspondence-theory' requires" (p. 68). "It is resemblance," he assures us, "that really is relevant to the problem of truth" (*ibid.*). Now "resemblance" is a wide term, and there are cases of "resemblance" in which the relationship would be more accurately expressed as "correspondence".[1] But Mr. Rogers proposes to identify "correspondence" with "resemblance" *in the barest sense, i.e.*, to water down the significance of "correspondence," so that it becomes synonymous with "resemblance" when that term is invested with a minimum of meaning. "Why," he asks, "is a resemblance judged to exist between a portrait and its original?—because the two possess something in common, or because of the *specific nature* of this something? I should answer without hesitation that the former is the case. If we are allowed to say that resemblance consists in the possession of *any* common character, we not only can explain[2] the instance in hand—where the identity is that of plan or purpose,—but also the innumerable other cases of resemblance, since the basis of similarity can be anything you please" (p. 69).

It seems clear, then, that according to the "correspondence-notion," as Mr. Rogers understands it, the truth of a judgment requires no more than "something in common" between the reality about which I am judging and the "ideas" which form the "ideal content" of my judgment. For it demands "correspondence": but "correspondence"—so far as the theory goes—is no more than "resemblance," and "resemblance consists in the possession of *any*

[1] Mr. Rogers says that I use "correspondence and resemblance interchangeably" (p. 68). I do not think that any of the statements in my *Essay on the Nature of Truth* commit me to the view that "to correspond" and "to resemble" *necessarily* mean the same thing: and it was certainly not my intention to reduce "correspondence" to "resemblance" in the most elementary sense of the term.

[2] For my own part, I am confident that I could "explain" anything and everything, if "explanation" means no more than this.

common character". Undoubtedly this interpretation of its second "main thesis" will secure the correspondence-theory against much criticism. For, even in the region of philosophical discussion, it is impossible to grapple with what is thin and impalpable: and a theory so vague and elusive is hardly worth discussing.

§ 3. But still graver difficulties show themselves in the "correspondence-theory," when Mr. Rogers proceeds to develop and explain its *first main thesis*. According to this thesis, it will be remembered, "truth" always involves (*a*) "ideas" and (*b*) "a reality which is existentially different from the ideas, and known only through them as a medium" (p. 67). The fact that these "extra-experiential existences," as Mr. Rogers calls the "reality" (*cf.* p. 73), can only be known through "ideas"—*i.e.*, through some form of experience—would seem to imply that the two "corresponding" (or "resembling") factors must both fall within experience. In other words, it seems to follow that the reality, *quâ* "extra-experiential," can have nothing to do with the theory. For, *quâ* "extra-experiential," it cannot be known, and therefore cannot be compared: whilst *quâ* known, or *quâ* comparable or compared, it has been drawn within the grasp of "ideas". Mr. Rogers admits that there is a difficulty here. But he insists that it is possible to conceive extra-experiential existences which yet correspond to "ideas," [1] and on p. 74 he tries to make this conception clearer and more definite. The real things whose existence the theory presupposes—the extra-experiential existences—have (so Mr. Rogers now tells us) "certain definite characteristics, or a determinate nature". And the theory "supposes that this nature or essence of the object [2] can be *thought*; that more or less adequate ideas of what it is like can also form a part of our mental furniture".

I confess that this last sentence has puzzled me a good deal. But after studying it carefully in connexion with certain of Mr. Rogers' later statements, I have been driven to the following interpretation:—

The extra-experiential existences possess an "ideal character". This is what is meant by their "definite characteristics," their "determinate nature," their "nature or essence". And this "ideal

[1] "Now I grant again that a distinction between experience and extra-experiential existences, and the definition of knowledge in terms of a transitive or mediate way of getting at the latter, may prove untenable; but the *conception* is certainly, as a conception, not so totally devoid of sense that an opponent cannot even get it in mind sufficiently to criticise it" (p. 73). The "conception" in question is that of "a reality *beyond* experience to which the mental factor corresponds".

[2] "Object" may seem an unfortunate term to apply to an *extra-experiential* existence. But even Kant, as we know, was sometimes so inconsistent as to speak of a "transcendental object": and of course Mr. Rogers will plead that the whole point of the "correspondence-theory" is that the object of knowledge is a reality existing in itself beyond experience.

character"—although a character of *extra-experiential* existences—is *also* (in more or less adequate form) "a part of our mental furniture". As "part of our mental furniture," the ideal character of the extra-experiential existences is an "idea"—or, as Mr. Rogers expresses it, "a fugitive 'ideal' content professing to grasp descriptively the objective characteristics of a real world". It is thus "an ideal or thought content," a "more or less adequate" idea (or ideas) "of what" the object "is like": and, in judging, the mind "refers" it to the object.

I hesitate to believe that this is Mr. Rogers' meaning. But, try as I will, I cannot interpret his statements in any other way. If I am misrepresenting him, I hope that he will not only repudiate my interpretation, but also explain (*a*) what other meaning he attaches to the "essence," "determinate nature," "ideal character" of the extra-experiential existences, and (*b*) what is the force of the term "also" in his statement that "ideas of what it is like can also form a part of our mental furniture".

If, however, my interpretation is correct, the advocates of the correspondence-theory would be ill-advised to accept the view which Mr. Rogers is attributing to them. For an extra-experiential existence whose "character" or "nature" is "ideal": whose character may fly across and, having obtained a lodgement in my mind, may fly back again as an "idea" which I "refer" to the object: whose character, indeed, if we take Mr. Rogers' words strictly, is also "an idea of what it" (*i.e.*, the object) "is like":—such an existence may be "beyond experience" in the sense that its conception is self-contradictory and nonsensical, but it is not "extra-experiential" in the sense that its being is devoid of experienced elements. For on the contrary, its "nature," its "essence," its *what*, is admittedly through and through an object of thought, and actually (to some extent at least) a "part of our mental furniture".

§ 4. If hitherto I have rightly interpreted Mr. Rogers, the correspondence-theory may be summarised as follows: A "true" judgment is true, because it "resembles" certain extra-experiential existences to which it refers, *i.e.*, because the judgment and the existences have "something in common". (*Cf. above*, § 2.) This identical something (the basis of the resemblance) is the "ideal character," or the "determinate nature," or the "essence" of the extra-experiential existences: and it is also the "ideal content" of the judgment, or our idea of what the existences are like. For we must apparently suppose that the identical something passes to and fro across the barrier which divides the mind from its extra-experiential objects. Thus it may enter for a time into the room, which I call my "mind," and help to "furnish" it: but presently, when I judge, my mind will "refer" this "fugitive ideal content" to the extra-experiential existence whose "character" it was and is —*i.e.*, will restore the runaway to the region (or the substance) from which it had temporarily escaped. (*Cf. above*, § 3.)

Or perhaps—for some of Mr. Rogers' statements seem to imply a different view—what flits to and fro across the barrier, is not the

"essence" of the extra-experiential existence itself, but a mere "reproduction" or "duplicate" thereof. (*Cf. above*, § 1.) If so, Mr. Rogers has still to tell us *what* is the identical basis of the "resemblance". *What* is it that the true judgment and its extra-experiential object—*what* is it that the mental "duplicate" and its real "original"—have "in common"?

§ 5. Though I fear that I have already exhausted the reader's patience, I have still to examine the concluding portion of Mr. Rogers' "perfectly intelligible" analysis of "the part that the mind plays in correspondence".

There is, he maintains (p. 74), "no experienced connexion" between the objects and the ideas; "it is the very point of the theory that they do not exist together *for* a mind. . . . For . . . the part which the mind plays . . . is, not to know itself, or its ideas even, along with the object in a single whole of experience into which both enter bodily;[1] it is to *refer* its ideas . . . *to* the object, in a unique relationship which one does not understand by substituting for it another relation of compresence, but only by looking at the specific act of knowing, and recognising it for what it claims to be. Correspondence, accordingly, is not a relation which we are conscious of when 'we know the object'. . . ."

So far, then, however much we may distrust Mr. Rogers' intuitive vision of what "the specific act of knowing" is, his general position is plain enough. I may "know an object"; but I cannot, in knowing it, know whether I know it or not. Truth consists in "correspondence"; but, when I am judging truly, I can have no opinion as to whether or no my judgment "corresponds" to the reality about which I am judging.

Yet, if the theory of truth as correspondence is to be maintained, it is necessary, as Mr. Rogers is well aware, to show that the resemblance between "ideas" and "reality" can be, and is, recognised by some mind in some act of knowledge (*cf.* pp. 72-73). Accordingly, he proceeds at once to urge that "later on we may note that our ideas actually were involved at the time". This subsequent recognition, he tells us, is effected in "a new act of knowledge which now has as its object the thing *plus* the former idea of it . . ." But in the very next sentence he corrects this description of the object of the "new act of knowledge": and the correction is both inevitable, and fatal to his theory. For, still referring to the "new act of knowledge," he says: "Here indeed at last the *ideas* of the two—of object and thought of object—are present in a unity of consciousness, or otherwise we could not compare them".

In the "new act of knowledge," therefore, we are *not* comparing "the thing" and our "former idea of it". Indeed, we obviously cannot do so. For *ex hypothesi* "the thing" is extra-experiential,

[1] It is difficult to see how anyone could suppose that ideas *enter bodily* into anything. *Cf.*, however, Mr. Rogers' sentence about "mental furniture" (*above*, §§ 3 and 4); and Plato, *Republic*, 345*b*.

and *ex vi termini* our "*former* idea" is past, so that they are not now before our mind or "present in a unity of consciousness". Hence, in the "new act of knowledge," we cannot possibly recognise that there was (or was not) "correspondence" or "resemblance" between "the thing" we knew in our former judgment and the "idea" or "ideas" whereby we knew it. The utmost we can effect, in our "new act of knowledge," is a comparison between two *ideas* and a recognition that they "resemble" (or fail to "resemble") one another. For we are now comparing (*a*) our present idea of our past idea of the thing, *i.e.*, our memory of our former thought, and (*b*) our present idea of "the thing" so far as that was revealed to us through the medium of our former thought. And neither of these two comparable elements—neither of these two "ideas"—can by any possibility be regarded as an "extra-experiential existence" or as a "reality beyond experience". Hence, even if they correspond to one another, and even if we can recognise their correspondence, we can draw no inference relevant to the correspondence-theory as Mr. Rogers has expounded it. For that, as we know, insisted that truth is a correspondence between extra-experiential existences and our ideas.

In conclusion, the reader's attention may be drawn to what is perhaps one source of the confusion in this part of Mr. Rogers' analysis. The new act of knowledge, he says, "has as its object the thing *plus* the former idea of it"; and he goes on to speak as if "thing" and "idea"—the joint constituents of the object of the new act of knowledge—were *two* factors, between which a relationship of correspondence might be discovered. But we must remember that, according to Mr. Rogers himself (*cf. above*, § 1), the "thing" can only be known through the medium of "ideas". Hence, the content of the former act of knowledge, which has now become the "object" of the new act, is not two comparable factors —not "a thing" on the one hand, and an "idea" on the other, mutually independent of one another. It is a single complex, which Mr. Rogers imperfectly describes as "the thing *plus* the former idea of it," thus concealing the fact that neither constituent is what it is apart from the other. For, as entering into our former act of knowledge, "the thing" was that which our idea of it revealed, and our "idea" was simply the medium revealing the thing.

HAROLD H. JOACHIM.

ON OCCUPYING SPACE.

THE object of this paper is chiefly critical. I wish to explain certain difficulties which I seem to find in the relation of bodies to space. But at the end I shall suggest that a sense of some such difficulties may underlie language used by Plato in a well-known passage of the *Timaeus*, 50-52. How far my difficulties have been already expressed by others, I do not know; and should be grateful to any reader who would point out to me an exposition of them.

Fundamentally, the difficulty may be put this way: What is meant by saying that a body occupies space? Connected with it is the question, what distinguishes a body from a geometrical solid of the same outline, or, What is solidity? But I will begin by asking a question slightly different, in which I find the problem more easy to indicate: What happens when a body moves?

When a body moves, it comes to be in a new place. Now I think we commonly imagine that to put a body in a place is like putting it in a box, and that there is no more difficulty about the one than the other. This is not so. To put a ball in a box is to bring it into new space-relations to other bodies; in particular, to the box. I am not concerned with the space-relations of bodies to one another, but of a body to the space which it occupies. Now if anything is unextended, I cannot occupy a place with it; I cannot put a sound or a fear in a new, or any, place. The moving thing is already an extended thing, occupying a place, *i.e.*, a certain portion of space. When it moves, that portion of space does not move. Does the body then, if I may so express myself, carry its extension with it, or not? If not, it would appear that in the act of motion it ceases to be extended; if yes, that one extension is in another. I am aware that some will denounce this language, and say that I ought not to speak of an extension, but only of an extended thing; and that by so putting it, the difficulty disappears. I hardly think so, and I am content to use the phrase, if it will create a sense of the difficulty.

Let me put it in another way. Imagine a geometrical solid, discriminated by the colour of its surface. A coloured surface has no thickness, though the body whose surface is coloured may have. Now if the position of this coloured surface shifted, the geometrical solid would appear to move. Apart from problems about continuity (with which I am not concerned), I find no difficulty here, for there is no space-filling body; what shifts its place is a mere outline, which carries, as it were, no extension with it.

Doubtless there are physical objections to the notion of a coloured

surface that is not the surface of a body. But there are also physical difficulties in defining the difference between a solid and empty space. And without referring to these, which involve mathematical questions beyond my depth, I should like to refer to some of a more general nature.

What do we in fact conceive a solid body—a body—to be by itself? We perceive it by sight and touch; but what we see of it is the coloured surface, and the colour, I will venture to say, does not belong to it by itself (if it exists by itself). No doubt, as a result of what we see, we come to conceive it to have a solid figure, which we did not see; but that is a geometrically solid figure, to the understanding of which the question what fills it does not matter. We may indeed distinguish in thought a hollow from a solid body. The hollow body if divided would look different from the solid body: it would not show a flat coloured surface in the plane of section. This, however, only leaves us with the same problem on our hands; for what are we to say about the solid shell? If there are solids at all, ultimately these must be absolute solids. We can imagine these divided *indefinitely;* at each stage the parts would show flat coloured surfaces in the plane of section; at no stage do these colours belong to the parts by themselves, nor does the fact that the parts are thus visible tell us at all what the body is, of which the surface looks thus. By sight then we cannot learn what it is for a body to be solid. As little can we by the sense of touch, by which we are led to call it hot or cold, hard or soft, rough or smooth. None of these qualities belong to the body by itself, though the configuration, in virtue of which it feels rough or smooth, may do so; but configuration again is geometrical, and we are asking not what the geometrical figure is, but to what it belongs. Hardness and softness, however, involve resistance; and it is in its resistance that the difference of body from empty space is often supposed to lie. What then is resistance, in the body? We recognise it indeed by the muscular feelings which we experience when we endeavour to overcome this resistance, or come in contact with the resisting body. But these are just feelings of ours, and we must abstract from them in considering what it is for the body to be solid. As little does it help to say that the solid body is impenetrable. Apart from any physical difficulties in absolute rigidity, we must recognise that the solidity of A cannot consist in an inability on the part of B to penetrate it. We want to know what in A prevents B from penetrating it. If any one replies, its solidity, I ask whether he has carried the question further; whether we know what we mean by solidity, or only give the name to that which shows itself sensible in certain ways.

And if we ask in what ways, it seems to me the most fundamental are two, of affecting the muscular sense, and of visibility. The former connects with nothing that can be ascribed to the body by itself; the latter connects with geometrical figure, which can be so ascribed. The solid body, in the last resort, is that whose

geometrical figure remains unaltered. It is true that we may conceive a solid body to change its figure by the sliding (for example) of one part along another in an imaginary plane of section; but the parts retain their figure; we cannot suppose this subdivision carried on so that there are no parts, however small, whose figures are unchanging, without supposing a solid to be composed of points. What we understand then in the solid body is its solid shape, the geometrical solid, to the nature of which size makes no difference. What fills this contour we do not understand; yet the solidity which we sought to understand was the space-filling solidity, not the geometrical. We have not discovered what distinguishes from the geometrical solid the solid body of the same shape, if these distinguishing characters are to be something belonging to the body by itself. Therefore we have not discovered what happens to the body itself in its movement, except that the geometrical shape shifts; nor what its occupancy of space is, other than that the shape is displayed in that particular portion of space.

Now in the passage of the *Timaeus* to which I have referred Plato distinguishes three *γένη* (50 C), *τὸ μὲν γιγνόμενον, τὸ δ' ἐν ᾧ γίγνεται, τὸ δ' ὅθεν ἀφομοιούμενον φύεται τὸ γιγνόμενον*. The last of these is the forms, *τὸ κατὰ ταὐτὰ εἶδος ἔχον, ἀγέννητον καὶ ἀνώλεθρον, οὔτε εἰς ἑαυτὸ εἰσδεχόμενον ἄλλο ἄλλοθεν οὔτε αὐτὸ εἰς ἄλλο ποι ἰόν, ἀνόρατον δὲ καὶ ἄλλως ἀναίσθητον, τοῦτο ὃ δὴ νόησις εἴληχεν ἐπισκοπεῖν* (52 A). The first is what comes to be and perishes, sensible things, *τὸ ὁμώνυμον ὁμοιόν τε ἐκείνῳ, αἰσθητόν, γεννητόν, πεφορημένον ἀεί, γιγνόμενόν ἔν τινι τόπῳ, καὶ πάλιν ἐκεῖθεν ἀπολλύμενον, δόξῃ μετ' αἰσθήσεως περιληπτόν*. The remaining *γένος* is *τὸ τῆς χώρας, φθορὰν οὐ προσδεχόμενον, ἕδραν δὲ παρέχον ὅσα ἔχει γένεσιν πᾶσιν* (*ib.*). Sensibles he had a little earlier called *εἰσιόντα καὶ ἐξιόντα*; they are *τῶν ὄντων ἀεὶ μιμήματα, τυπωθέντα ἀπ' αὐτῶν τρόπον τινὰ δύσφραστον καὶ θαυμαστόν*; and through them this factor of place appears, at successive moments thus and thus—*φαίνεται δι' ἐκεῖνα ἄλλοτε ἀλλοῖον* (50 C). What Plato means is this. There are certain forms, such as sphericity or pyramidality, which we cannot see, nor visually imagine (for we can only see or imagine a sphere or a pyramid), but which we conceive. There are sensible spheres and pyramids, having the same name with 'the sphere,' 'the pyramid,' which cannot be except somewhere (whereas sphericity has no place), but whose relation to their universal or form, after which they are said to be fashioned or of which they are said to be imitations, is very hard to state. And there is space, wherein alone these things fashioned after the forms can be, which is distinguished only as they appear in it, and which by itself cannot be perceived at all, though reasoning forces us to admit it as a third *γένος—αὐτὸ μετ' ἀναισθησίας ἅπτὸν λογισμῷ τινι νόθῳ* (52 B). I suggest he meant, that what we understand in bodies in their geometrical character (not their solidity); that when a body moves, this geometrical solid which somehow images an eternal geometrical form appears here instead of there—disappears here, reappears there; but how, we do not understand.

Now to the study of these geometrical solids one thing, which they appear to have, is quite irrelevant, *viz.*, their magnitude. If sphericity is somehow shown to us by an image of it in space, the image must be of some size; but of what size, matters not. The only questions of magnitude that arise in our efforts to understand bodies are questions of relative magnitude. It arises from the nature of eternal forms that, *e.g.*, any cone is one-third of the size of a cylinder of the same base and height, and so forth. The ratio is intelligible; but to that again the size of the bodies that stand in the ratio makes no difference. The intelligible features in bodies are their ratios and geometrical forms: what may display these forms, or stand in these ratios, we do not understand. That anything should so stand involves the fact of space, a thing not really intelligible, nor real as the ratios and forms are real. And the sensible bodies are not real. If they were, then would arise the question of their real size—a question with no answer. You cannot say that a given portion of space, or the body occupying a given portion of space has any size of its own. Its parts contain as many parts as itself does. This is why the factor of space is called *μέγα καὶ μικρὸν*; you may indifferently regard any portion of space as large or small. But you cannot indifferently regard a ratio as $\frac{1}{2}$ or $\frac{1}{4}$. Ratios, like geometrical forms, are eternally distinct from each other and intelligibly characterised. Bodies display them in a place. When they move, the form is displayed in another place, and that is the movement of the body. When one shrinks another ratio is displayed.

I do not say this doctrine leaves no difficulties. I only suggest that there are certain puzzles which we commonly overlook in the familiar fact of the motion of sensible bodies, and that perhaps they had attracted Plato's attention, and helped to account for his formulation of problems in the *Timaeus*. And they are problems, some solution of which seems necessary to the realism which holds bodies in space to exist independently of perception.

H. W. B. Joseph.

VI.—CRITICAL NOTICES.

Papers on Psycho-Analysis. By Ernest Jones, M.D., M.R.C.P. (Lond.). Revised and enlarged edition. Baillière, Tindall & Cox. Pp. x, 715.

This work is a much enlarged edition of an earlier book by the same author. It consists of papers divided under the headings of General, On Dreams, On Treatment, Clinical, and On Education and Child-Study. The author is a Freudian of the straitest sect; he dedicates his book to the master, and takes several opportunities to anathematise Yung for his later heresies, whilst recognising the value of Yung's earlier work.

If Freud's theories are to be fairly criticised we must carefully separate five different questions. (i) Are repression, distortion, and the shifting of 'affect' from one object to another, genuine and important factors in mental life? (ii) Does repression occur almost wholly with regard to sexual matters? (iii) What is the precise 'cash-value' of the Freudian technical terms, such as the unconscious and the censor? Evidently there is an element of mythology in them, and we have to ask how far the phraseology used may have led Freudians beyond what the observed facts will justify. (iv) How far does a given doctor's analysis of a given case seem to be justified by the facts which he records. (v) Is it desirable on practical grounds that psycho-analysis should be commonly used for dealing with nervous diseases?

The fourth and fifth questions seem to me to be philosophically unimportant; yet I am much afraid that a negative answer to the fifth, and a feeling of disgust at the conclusions and doubt as to the adequacy of the arguments in connexion with the fourth, have caused many philosophers to reject the whole Freudian theory. Dr. Jones deals with both these points in some measure. He admits that the fragments given of actual analysis are very scrappy. They certainly are; and the conclusions arrived at in particular cases seem, on the data offered, to be much on a level with Serjeant Buzfuz's proof of the erotic significance of chops and tomato-sauce. [Indeed the Serjeant's contention that a warming-pan is an erotic symbol is certainly not in the least further fetched than Dr. Jones's *obiter dictum* that people cling to a gold-standard because gold is a well-known symbol for excrement, 'the material from which most of our sense of possession in infantile times was derived' (p. 172).] Dr. Jones, however, has two excuses. To give a complete analysis would be too long and tedious. And a person who has never done

any psycho-analysis and is not used to the extraordinarily flimsy connexions which satisfy the unconscious cannot estimate the probability of a given analysis being correct. I think we must in fairness grant the second contention. An outsider cannot estimate the probability of special arguments in an entirely unfamiliar region; the same difficulty meets one constantly in considering other men's experiments in psychical research; and one can see from one's own how many points there are which legitimately affect one's judgment of probability and yet cannot be stated satisfactorily to others. At the same time psycho-analysts ought to remember that the flimsiness of the connexions which satisfy the unconscious cuts both ways. If it ought to make us chary of denying their conclusions; it ought to make them equally chary of asserting their analysis to be the only possible one in a given case.

The question whether the moral effects of psycho-analysis are likely to be good or bad is not important to us in any sense except that, as Dr. Jones justly points out, the way in which many people reject the whole Freudian psychology because they think its conclusions disgusting and its practice dangerous is a fine example of Freud's own doctrine that consciousness is largely occupied in providing imposing arguments to satisfy and mask unconscious wishes. We can therefore turn to the remaining three questions.

(i) Dr. Jones's book, my own introspection and observation, and the accounts which I hear from medical friends treating cases of shell-shock, leave me with no doubt as to the extreme frequency and importance of repression in mental life. The shifting of affect is also an easily observable phenomenon. In my last year at school I had on certain occasions to read the lesson for the day. I always hated the prospect of this, which filled me with acute nervousness. On the morning of the day I would awake with a diffused feeling of uneasiness, and this would persist when the thought of reading the lesson was not before my mind, so that I would sometimes catch myself for a moment wondering what was the cause of the curious feeling in my stomach. I can therefore well believe that emotions can become separated from a consciousness of their objects and float loose for a time, either to appear as bodily symptoms or to be directed to consciously cognised objects.

As I can verify all the characteristic Freudian mechanisms in a mild form in my own mind and am told of their existence in acute forms in soldiers by observers whom I have every reason to trust, I feel no doubt of the substantial correctness of this part of Freud's theory. To this evidence must be added the important fact, well brought out by Dr. Jones, that Freud's theory provides an explanation of numbers of odd occurrences in ordinary life, such as slips of the tongue or pen, which we ordinarily treat as due to 'chance'. Leibniz, who seems to have foreseen everything, was never tired of pointing out that the appearance of indeterminism in the mind is due to our failure to notice subconscious links in chains of causation which are partly conscious. As usual, Leibniz was right; and

he would doubtless have welcomed Freud's work with as much enthusiasm as he would have shown for Frege's.

(ii) Dr. Jones treats in some detail the view that what is suppressed is nearly always ultimately sexual matter. His position is that Freud uses the word 'sexual' in a much wider sense than most people, and that, in this sense, his statement is correct. He does not give any very precise definition of Freud's usage, and leaves us to infer it from an analogy to the elements in chemistry, and from the statement that Freud applies 'the term "sexual" to mental processes which, like shame, derive their origin from the sexual instinct'. Now psycho-analysis, according to him, shows that a great many processes which do not seem to be so derived really do have this origin. This may be true; but it is clear that the question at issue here between Freud and his opponents is one of fact and not of terminology. Freud's extension of the word 'sexual' is only justified if he *can* make out that the processes to which he does, and his opponents do not apply it originate in processes which are sexual in the narrower sense which his opponents employ. And this, I take it, is what they deny.

As to the question of fact, I think the Freudians are right in ascribing much greater sexual interests to quite young children than ordinary people would admit. Freud's description of the young child as '*polymorph pervers*' seems to me literally correct, if we interpret him to mean that most children have in various degrees the desires which, when developed at the expense of others, constitute recognised perversions. But I should substitute for Dr. Jones's extension of the word 'sexual' the following: A process in a child may be called 'sexual' if processes in adults which *develop from it* as their chief source, and in a continuous way, are sexual in the narrower sense. I thus take the converse of Dr. Jones's definition, and add two limitations. Dr. Jones is never tired of pointing out that ordinary psychologists constantly take as *the* cause of a mental event some trivial but striking conscious factor in its causation. He is right; but Freudians are not wholly guiltless of a similar fallacy. Dr. Jones derives 'a passion for lucidity of thought' (together with some hundreds of other mental characteristics of the most diverse kinds), 'from infantile analerotic' emotions. I daresay the one has sometimes something to do with the other; but the connexion is so slight and the other factors which produce a passion for lucidity of thought must so enormously exceed the single factor of infantile interest in the process of excretion that it is ridiculous to speak of deriving the former from the latter. Psycho-analysts seriously prejudice their own very good claims by this kind of nonsense, which they might well reserve for Pemberton-Billing trials and similar legal knockabout farces.[1]

[1] One is sometimes reminded by Dr. Jones of the young man in Mallock's *New Republic*, who had in his portmanteau twenty-seven (I think) theories of the origin of the Idea of God, each more degraded than the last.

I am still rather sceptical as to the prevalence of the famous 'Oedipus Complex'; not because it shocks me, but partly because I can detect no trace of it in memory whilst I can remember other equally disreputable infantile wishes (from the adult point of view), and partly because it seems to imply much more definitely directed sexual desires in very young children than there is otherwise evidence for. If the incest-motive towards parents be so very common in young children, why is it practically always repressed at such an early age? The wickedness of incest is not, I believe, a common subject of conversation and admonition in the nursery.

Subject to these limitations I think we may accept the Freudian view. It is clear that hardly any of our early wishes are subject to such strong social repression as sexual ones, and it is therefore not surprising that, if there be anything in the theory at all, repressions of this kind are found to be at the root of a large proportion of nervous disorders.

(iii) The third point is psychologically the most important. I must first remark that there seems to be a distinct inconsistency in Dr. Jones's book as to the characteristics of the unconscious. Throughout the greater part of it the unconscious itself is supposed to be radically illogical, and to move by means of the most trivial and superficial connexions. But in the chapter on Dreams a different view is presented. Here it is constantly insisted that the latent content (*i.e.*, the unconscious thought) underlying a dream is logical and coherent, and that the incoherence of the dream is due to distortions made in the latent thought with a view to 'passing the censor'.

The next question is: What do we learn from the Freudian results as to the existence of unconscious states of mind and the material of which they are formed? The unconscious is actually defined by Dr. Jones simply as what we cannot become aware of by acts of voluntary introspection. It is thus *defined* (*a*) negatively, and (*b*) by a relation to possible acts of introspection.

Now our inability to cognise these states by introspection might, *a priori*, be due to one of three causes. (*a*) It might be simply because they do not exist to be introspected; or (*b*) because, although they exist, they are so radically different from ordinary states of mind that it would be as inappropriate to expect us to be able to introspect them as to introspect the atoms in a benzene nucleus; or (*c*) because, although they exist and are of the same general character as conscious states, they have either some peculiar property or some peculiar relation to the rest of our minds which prevents us from directing acts of introspection upon them. Dr. Jones at one place early in his book adopts a highly agnostic attitude, but it is pretty clear from his language at all other places that he proceeds on the assumption—conscious or unconscious—that the facts imply the second form of the third alternative. The unconscious is supposed to consist of the same sort of stuff as the conscious and to coexist with it. But it has a relation to the part of our mind which introspects different from that which our conscious states have, and

this relation prevents us from directing introspective attention on it. Now the question is: Do the facts justify this inference?

Before we can deal with these questions it must be noticed that there is another view about the relation of the conscious and the unconscious which hovers throughout the book and does not seem to have any close connexion with the definition quoted above of unconscious states. On the theory which we have just now ascribed to Dr. Jones, and which fits in best with his definition of the unconscious the real object of repression is, not the unconscious states of mind, but acts of introspection. What happens in repression, on this theory, is simply that attention is diverted forcibly from certain states of mind. But Dr. Jones almost everywhere speaks as if the repression were exercised on the states of mind themselves, as if they constantly bobbed up and were thrust down by the censor. This *may* be merely a picturesque way of describing a diversion of attention; but, if it be taken literally, it implies a quite different theory of the unconscious, of which two remarks must be made. (*a*) It has no obvious connexion with the explicit definition of the unconscious which Dr. Jones offers; and (*b*) It *assumes* the coexistence of the unconscious with conscious states of mind. Let us call this the Threshold Theory, and the other the Introspection Theory, and let us begin with the Introspection Theory.

Introspection Theory.—The coexistence of unconscious states with conscious ones seems to be inferred from two facts. (*a*) Certain bodily symptoms, certain irrational fears, and other conscious states which are inexplicable so long as we confine ourselves to their conscious or pre-conscious antecedents and concomitants persist and develop over a space of time. (*b*) By an appropriate method of psycho-analysis we can become aware of states of which we could not otherwise become aware. These seem to explain the otherwise inexplicable bodily symptoms or conscious states. It is assumed as self-evident that if they did not exist during the period over which the symptoms have lasted they could not explain these symptoms. Further, when the process of analysis has been carried out, the states of which we become for the first time aware seem to be of the same general nature as ordinary conscious states. Lastly their value as links in an explanatory chain depends on assuming that they are substantially analogous to conscious states. An inexplicable conscious fear directed towards closed spaces is explained by an originally quite rational fear of (say) being buried in a dug-out. The thought of the dug-out has become unconscious; it is assumed to *persist* in order to explain the persistence of the conscious fear of closed spaces, and to explain the fact that on psycho-analysis we do become aware of it; it is assumed to *resemble* in structure a conscious fear of a consciously cognised object in order to explain the irrational conscious fear of closed spaces.

Now all this inference depends on suppressed premises which are open to criticism. (*a*) It is not necessarily true that, because an effect persists and develops, its cause must persist too. (*b*) Even if

we accept this metaphysical axiom about causation all that is necessary is that *something* should persist. This something might (i) cause the symptom or the conscious state, and (ii) in co-operation with the process of psycho-analysis cause a memory of the incident which originally started the trouble. The fact that under certain circumstances you remember an incident X at most proves that *something* Y persists in the mind which, together with these circumstances, produce a memory of X. It has no tendency to prove that the persistent Y is itself a cognition of X. The metaphysical dogma assumed here is that cause must resemble effect. (*c*) The language used about the transference of affect, and the distortion of the unconscious by the censor goes far beyond the observable facts, unless it be taken as a mere metaphor, and is hardly self-consistent. Suppose the unconscious state could be proved to be a fear of an unconsciously cognised object O. Suppose that the conscious state which it causes is a fear of a consciously cognised object Ω. The doctrine of the transference of affect, taken literally, asserts that the fear factor ϕ in a complex $\phi \rightarrow$ O can be split off and directed to Ω to form the complex $\phi \rightarrow \Omega$. Now I should like to know (*a*) what is the criterion of identity used? How do you know that the ϕ factor in $\phi \rightarrow \Omega$ is *the same as* the ϕ factor in $\phi \rightarrow$ O? (*β*) If the transference of affect be taken literally it contradicts the view that the unconscious state is a *fear*. If $\phi \rightarrow$ O in the unconscious be literally broken up and its affect transferred to a consciously cognised object Ω, what exists in the unconscious is not a *fear* of O but an unconscious *cognition* of O. Now psycho-analysis makes the patient aware of a *fear* of O. Hence, if we take the transference of affect literally, it is impossible that the state of which psycho-analysis makes us aware can be the same state as persists in the unconscious. The theory, as offered, tries to make the best of both worlds. By talking of the transference of affect as if affect could be moved about and identified it implies the persistence in the unconscious of states to which it can be joined and from which it can be separated. By talking of the states that we *discover* on psycho-analysis it implies that these are the states that have existed all along in unconsciousness. But it fails to notice that the two lines of argument destroy each other, since they lead to radically different unconscious states.

Two alternative theories would seem to be possible. (i) A given affect is either wholly conscious or wholly unconscious, and there is no sense in talking of its being transferred from an unconsciously cognised to a consciously cognised object. But a conscious affect may be directed at the same time to two objects, one consciously cognised and the other unconsciously cognised. Transference would then mean, not the *substitution* of a consciously cognised object for an unconsciously cognised one, but the *addition* of a consciously cognised object to the unconsciously cognised one to which the affect is already directed. (ii) A milder theory is simply that when a past emotional experience can no longer be recalled except by psycho-analysis the trace that it leaves tends to cause a

conscious emotional experience of the same general quality directed to some consciously cognised object. The metaphysical dogma involved in passing beyond this view is the assumption that because A is a remote cause of B, and A and B contain qualitatively similar factors ϕ_a and ϕ_b, therefore B is made by removing ϕ_a from A and connecting it with some new factor.

Very similar criticisms apply to the doctrine that the manifest content of a dream is a distorted form of the latent content. Does the latent content coexist with the dream? If so, how can *it* be distorted? Or do you simply mean that the latent and the manifest content coexist, that the former is an important factor in the causation of the latter, and that the latter resembles the former in many important respects? The latter is the utmost that can be got out of the observed facts.

I think there is a very common but far from plausible assumption about ordinary memory underlying much of the psycho-analytic terminology. A memory is *prima facie* simply a cognition whose object exists at an earlier moment than itself. The object in general is not, on the face of it, mental at all, *e.g.*, when I remember the late Master of Trinity the object is a deceased human being who neither was nor is a state of my mind. Now when people talk of memories being 'stored-up' in the mind they always seem to forget this fact and to speak as if *remembered objects* were stored up. I imagine that all that is really stored up is some kind of trace which, in conjunction with some present stimulus, causes me to have a cognition whose object is the past event, person, or place. On this interpretation of memory the view that what is stored up resembles my conscious cognition of the object loses all plausibility. Even if it be essential to memory to be aware of an image which in fact resembles the object remembered, and even if images be mind-dependent, it remains certain that this *de facto* resemblance will not account for memory. It is not enough that the image should in fact resemble the object to be remembered; it must be *known* to do this. And there is no reason whatever to suppose that what is stored up is these images; for this is neither necessary nor sufficient to account for the simplest case of direct memory.

Thus I am inclined to think that the Introspective Theory, when carried to its logical conclusion, leads to a very different view from that with which we started. The unconscious and preconscious would consist of traces which we have no reason to suppose resemble any state of mind; for this reason they cannot be introspected. Some of these traces can co-operate with volitions to give memories of objects cognised in the past. Others cannot do this, and will only give rise to memories under the special stimulus of psycho-analysis. The former constitute the pre-conscious, the latter the unconscious. Repression is thus, not the forcible diversion of *introspection* from certain *states* of *mind*, but the forcible diversion of *memory* from certain *objects* which have been cognised in the past and have left traces.

Threshold Theory.—The view that unconscious states try to

'rise up' into consciousness and are 'pressed down' is, of course, metaphorical. But the metaphor does express certain observable facts which it is easy to indicate and difficult to analyse. An example is the curious way in which one seems to know a name that one is trying vainly to recall, and can tell perhaps how many syllables it has or that it does not begin with some suggested letter. I think that the threshold theory regards such experiences as being on the borderline of the conscious and the unconscious, and as giving an indication of what the unconscious may be like. I cannot attempt to analyse such experiences here and now; but I am inclined to think that a complete theory of the phenomena with which Freudians deal needs factors both from the Introspection Theory and from the Threshold Theory. I seem to be able to detect repressions in my own mental life, and they always seem to involve (i) a diversion of attention from certain objects, and (ii) at the same time a vague cognition of those objects in the sense of the Threshold Theory.

I must close this too long review by saying that Dr. Jones's book (in spite of some exaggerations, incident to his enthusiasm for his subject, which may 'evoke a smile in the young or a blush in the fair') seems to me to form an excellent introduction to psychoanalysis, and that it has persuaded me that no psychologist can safely neglect the Freudian school, whether he likes their conclusions or not.

C. D. BROAD.

Greek Political Theory: Plato and His Predecessors. By ERNEST BARKER. London, 1918. Methuen & Co., Ltd. Pp. xiii, 403.

THOUGH Mr. Barker's work is, in a way, an expansion of part of a volume published as long ago as 1906, the process of revision and expansion has been so thorough that no apology need be made for treating the result as to all intents and purposes a new book. As such I hope I may be allowed to give it a very hearty welcome. I do not think it any exaggeration to say that Mr. Barker has written by far the best work yet in existence on the social and political side of Plato's philosophy, and that every reader will wait impatiently for the companion volume dealing with Aristotle and his successors. It is to be hoped that "the position of national affairs" will not delay the completion of Mr. Barker's labour of love very long. The great positive merit of Mr. Barker's treatment of his subject is that he has at last given us a work on Plato in which the *Laws*, far the most splendid and fruitful of all ancient contributions to the study of conduct, education, and social organisation, is adequately recognised and utilised as it deserves to be. The silly notion that Plato's *Laws* is a second-rate work, exhibiting symptoms of senile aberration which make it almost negligible to the student of Platonic philosophy, if it still survives anywhere, ought to receive its *coup de*

grâce from the chapters in which Mr. Barker studies successively the general social and political theory of the book which Plato evidently designed to be his *magnum opus*, and its contributions to jurisprudence and the theory of education. As Mr. Barker is a philosophical tutor in Oxford, it is perhaps permissible to express a hope that his book may come to be regularly read for "Greats" and may put an end to the scandalous practice of keeping the Oxford Honours student, who is supposed to make Plato the foundation of his reading in ethics and politics, wholly ignorant of Plato's final and matured judgments on the deepest issues of practical philosophy. Mr. Barker has done specially well to append to his chapters on the *Laws* an excursus calling attention to the almost servile dependence of Aristotle's overrated lectures on *Politics* upon the greater work of Aristotle's greater teacher. I could only wish that Mr. Barker had allowed himself in this connexion to discuss the kindred point of the sources of Aristotle's ethics. It would have been easy to show that the Aristotelian *Ethics* is just as dependent as the Aristotelian *Politics* on the *Laws* and the *Politicus*, and that in respect of many things which are quite commonly treated by writers who should know better as "improvements" on the Academic doctrine. It cannot too often be repeated that Aristotle was not, as I used to be told (though I always took the liberty to doubt it), in my undergraduate days, a practical thinker bent on curbing the speculative extravagances of *idéologues*. The real truth is that it was Plato and the Academy who were the practical politicians, Aristotle who was (naturally enough in a man who was all his life an ἄπολις), the *idéologue*. What really interested *him* was not legislation or the expulsion of the Carthaginian barbarian from Sicily or the diffusion of Hellenism over the East, but "theology" and cosmology. His *Ethics*, in particular, contains not one single thought which is not a mere reproduction of something to be found in the *Politicus*, *Philebus*, or *Laws*. In particular, the common notion that Aristotle somehow corrected the "one-sidedness" of the Socratic and Platonic doctrine that virtue is knowledge is due simply to ignorance. Better acquaintance with the way in which this famous (and true) doctrine is presented in the *Laws* is enough to show that there is not really a shade of difference on the point between Socrates, Plato, and Aristotle. Indeed *no* Greek moralist ever dreamed of denying that virtue is knowledge of the good, and that men only pursue "unreal" good because they mistakenly suppose it to be real. (Official Christianity, of course, maintains the same thing to the present day, when it ascribes the choice of evil to the "*deceits* of the world, the flesh, and the devil".)

My only criticism of the general line of argument in Mr. Barker's book would be that it is so good that it might easily have been better still. I mean that his appreciation of the importance of the *Politicus* and *Laws* is so sound that it should have led him a little further. He still, in my opinion, attaches an undue philosophical importance to the positions of the *Republic*, though he has less excuse for doing so than students of Plato who have fallen into mistakes

he avoids. He sees, in my opinion quite rightly, that the *Republic* is, comparatively speaking, an early work which must have been completed by the time Plato was forty, and that we have to allow for a preponderance of the dramatic over the philosophic in the earlier Platonic writings. Now it is very unusual to find that a philosopher of the first order whose life is prolonged as Plato's was reaches his most important results by the age of forty. What would be left of the work of Descartes or Kant, for example, if those philosophers had died at forty? Berkeley's best-known works, indeed, were published at a much earlier age, and Hume's *Treatise* was written before the author was twenty-five. But Berkeley's thought in his youthful works is marked everywhere by a pretty patent want of maturity, and Hume spoiled himself as a philosopher by his neglect to prosecute real metaphysical reflexion after the literary failure of the *Treatise*. It seems, moreover, rather arbitrary on Mr. Barker's part, after recognising in principle, as he does, the genuinely Socratic character of Plato's earlier dialogues, to decide for no apparent reason that the positions taken up by Socrates in the *Republic* must all be treated as the personal convictions of Plato. One cannot help wondering whether Mr. Barker has not a little illogically shrunk from the consequences of his own admissions, perhaps from an unconscious desire to conciliate the sort of Oxford tutor who objects to what he amusingly calls the "St. Andrews school" because he knows that if they are right he will have to reconstruct his lectures. No one supposes that Plato is personally bound by all he puts into the mouth of Protagoras or Hippias; why should we assume that the case is different in principle with what he puts into the mouth of Socrates? It is different when the speaker is anonymous, like the Eleatic of the *Sophistes* or the Athenian of the *Laws*. As these speakers are not put before us as known historical persons, we have not here to reckon with the necessity of making them speak in conformity with their known views and known manner of utterance. *They* may fairly be taken to commit the author who has made them the leaders in a philosophic discussion, unless he has given positive indications—as Plato has not done—that they are not speaking on his behalf.

My chief reason for dwelling on the point is that I think the assumption that Socrates, in the *Republic*, = Plato leads Mr. Barker to some misapprehensions on two rather important points. He is very much in earnest with the view that the social scheme of the *Republic* is one in which Plato, at the age of forty, personally believed in all its details and that Plato seriously proposes it as immediately practicable. I can see no ground for either assumption. Of course Plato must have been at one with the general spirit of the proposals of Socrates in the *Republic* or he would not have written the dialogue. But this does not warrant our holding that every detail of the programme put forward by Socrates in a dialogue so richly dramatic must have commended itself to Plato, even at the moment of writing. As for the view that the Callipolis is no

"Utopia" but a scheme intended to be put into practice as it stands, the *Republic* itself seems to me to prove the very opposite. Mr. Barker strangely appeals for proof of his thesis to the passage in which it is proposed by Socrates to get over the difficulty of effecting the "social revolution" by "rusticating" all citizens of more than ten years old and so getting a free hand to work on the rising generation. Surely Mr. Barker has forgotten, as the pedants of whom he is not one regularly do, that there was "lots of fun in" Socrates. It is just this very passage which, more than any other, *proves* that Socrates himself does not really look upon his Callipolis as a Marxian looks on his "socialistic community".

I think the same unwillingness to recognise the dramatic character of the *Republic* partly accountable for what seems to me Mr. Barker's partial failure to understand the point of the severe satire on δημοκρατία. Mr. Barker, of course, admits that the defects noted by Socrates are defects to which "democracy" is prone, and he has a good deal that is suggestive to say on the other side about ways in which they may be minimised and about the good points in "democracy". I do not myself suppose that Plato at any time of his life would have denied the truth of most of what Mr. Barker urges against him. But he might have said, and with justice, that none of these considerations are in the least germane to his indictment of δημοκρατία in the *Gorgias* and *Republic*. For what is attacked there is a very special and peculiar thing which it would be strange that any philosopher should not oppose. The attack is not on "popular government" as such but on the δημοκρατία of Athens during the Peloponnesian War. Now Mr. Barker seems not to have made it quite clear to himself what the really objectionable feature of *this* specific "democracy" was. What it was he will see if he asks himself "where did the plenitude of sovereignty reside in the Athenian constitution?" It resided, of course, in the Heliaea, and this is just why Solon who created the Heliaea and Pericles who made them "democratic" by paying the citizen dicasts are always thought of correctly as the two men most directly responsible for the character of the Athenian constitution. The real evil, inseparable from the democracy after Pericles, was that, owing to the rule that an outgoing magistrate must pass his εὔθυνα to the satisfaction of a paid popular court, every one who took any part in public life at Athens risked his citizen rights, his property, even his life, if he adopted any measure which might be resented by a popular "jury" who were judges of the law as well as of the fact, had no rigid rules of evidence or procedure, and were to a considerable extent also free to determine the penalty in case of conviction without any possibility of having their decision modified by a "prerogative". The terms on which statesmen undertook office in our own country in the reign of Charles II. were bad enough, but never so bad as this. Halifax or Danby or Shaftesbury had always to reckon with the possibility of impeachment, or Bill of Attainder, but even the iniquitous proceedings on Bill of Attainder were not quite so unfair to the politician who had provoked general

animosity as prosecution before an Athenian dicastery, and the royal prerogative could be used to protect the attainted from the full fury of his enemies, as it should have been used by Charles I. for Strafford and would probably have been used by William III. for Fenwick but for the folly of Fenwick himself. In fact trial for political short-comings at Athens can only be compared with trial before a "Soviet". Of course so long as a man of the personal qualities of Pericles was at the head of the administration the full iniquity of the system could be undetected, but the history of the Athenian democracy in its behaviour to its public servants under the régime of the vigorous but coarse and brutal "leaders of the δῆμος" who succeeded Pericles seems to me to bear out to the full everything which the *Republic* and *Gorgias* say about the tendencies of what those dialogues call δημοκρατία, the "sovereignty of the *canaille*". δημοκρατία with a "fundamental law," such as we read of in the *Politicus* is, of course, a different thing, a form of the "sovereignty of law," and it indicates no change of mind in Plato that he should judge it more favourably. There is no reason to suppose that, to the end of his life, Plato had more than one opinion about δημοκρατία as practised in Athens under the guidance of Cleon or Hyperbolus.

I note one or two other failures of insight in the discussion of the *Republic* which would not surprise me in most writers about Plato but do surprise me a little in Mr. Barker. I see, for instance, that he is among those who gravely censure the unfeeling harshness of Socrates' observations about valetudinarians. He forgets that the fury of Socrates is part of his humour; he is amusing himself by denouncing the selfish *malade imaginaire* much in the style of Dickens's Boythorn, and must not be taken to be much more serious than Boythorn was in his frequent proposals of heroic measures to be taken with bores and nuisances. If Mr. Barker will read and reflect on the Hippocratean περὶ διαίτης $\bar{\gamma}$, he will see that the explanation of the assumption that the "working-man" only puts himself "in the doctor's hands" when things are desperate is simply that in the Socratic age there was an excellent literature of guides to self-regulation in matters of hygiene intended to be used by the very class of persons of whom Plato is speaking. So again I suspect Mr. Barker misses the real point about the "infanticide" in the *Republic*. Permission to Platonic guardians of over 55, after life-long training in σωφροσύνη, to enjoy the company of ladies of over 40 who had also been guardians, without State-supervision would not be likely to be abused—(may I protest against the nonsense of Prof. Woodhouse who has just described this permission in vol. x. of Hastings' *Encyclopædia of Religion and Ethics*, art. PROSTITUTION (Greek) as license for "promiscuity,") and if it were, would not be very likely to lead to "consequences". Even in our own climate ladies do not commonly have "additions to their families" after the age Plato specifies, and the thing would be more unusual still in a Mediterranean country. Plato obviously means simply to allow the guardians of both sexes the comfort of a

little domesticity in their declining years, a fireside and a companion; the "offspring resulting from the arrangement" may safely be doomed to "exposure," since the chances all are that there never will be any to "expose". The moral character of the parties is one guarantee against abuse of the freedom so tardily granted them, and besides this their age has to be allowed for. If I might mention a few minor points on which I think Mr. Barker might reconsider his views, I should like to suggest that it cannot well be true that Sparta is aimed at in the description of the "oligarchical state" in *Republic* VIII. The kind of community meant is obviously a great commercial city in which the merchant-princes control affairs, like Venice or Amsterdam in later times. What particular city Socrates may be supposed to have in mind is not clear,[1] but it can hardly be Sparta, which never had either commerce or "merchant-princes". I doubt also whether the account of the "tyrant" owes much to the career of Dionysius I. We must remember that Socrates is supposed to be speaking somewhere about 425 B.C., and it would be an anachronism to put into his mouth expressions which require to be understood in the light of events that only happened long after. So far as I can judge, the "historical allusions" are mainly to the story of Peisistratus. The *character* of the tyrant, which does not correspond to any estimate Plato is likely to have formed of Dionysius, is shown by comparison with the *Gorgias*, to be largely reminiscent of the most famous autocrat of Socrates' day, Archelaus (also, I believe, alluded to under the transparent disguise of "Ardiaeus the Great" in the "myth of Er").

I am glad to see that Mr. Barker is ready to be convinced about the genuineness of the *Epinomis* and *Epistles*. He does not however fully appreciate the importance of the fact that the *Epistles* were included as a body in the earliest "edition" of Plato known to us, that of Aristophanes of Byzantium. This means that, like the ἐπιστολαὶ Παύλου, they came into the Canon *as a whole*, not as separate items. It is uncritical to reason as though we had to regard each "epistle" simply on its own merits. It is the collection as a whole about which we have to decide whether its presence in the "Canon" warrants a belief in its genuineness. If this question can be answered affirmatively, then only the strongest internal evidence of non-Platonic authorship can justify the rejection of any one item. (In my own opinion we have this internal evidence only in the case of *Ep.* I., but this must be regarded not as a forged "letter of Plato" but as a genuine early fourth-century document connected with Sicilian affairs, and for that reason included from the first in the Platonic correspondence.) As for the *Epinomis*, I think that if Mr. Barker will go into the facts he will discover that the only person in antiquity who ever doubted its authenticity was Proclus and that Proclus doubted, in defiance of unanimous tradition, on two grounds, one of which is worthless and the other makes very strongly for the dialogue. The modern "athetizers" give no

[1] Carthage.

reason at all for their attitude, and I suspect that some of them have not even read what they reject.

I should like to explain what I feel sure is the reason for the selection of 37 as the number of Plato's nocturnal Council. Ritter —*pace* Mr. Barker—is obviously right in saying that the 37 are 36 + an odd person added to prevent any decision from being carried on an even division of the votes. But why 36 rather than 24 or 48 or any other multiple of 12? Any one conversant with the remains of the Pythagorean arithmetic will see at once that the reason is that $36 = 6^2 = 1^2 \times 2^2 \times 3^2 = 1^3 + 2^3 + 3^3$. *I.e.*, 36 is not only the "square" of 6, the first "perfect number," but also the product of the three first "squares," and further the sum of the three first "cubes". (This last point was thought to have considerable embryological significance, as may be seen not only from the *Theologumena Arithmetica* but also from the *περι σαρκῶν* of the Hippocratean corpus.) Our information about this number-lore comes primarily, to be sure, from post-Christian Neo-Pythagoreans, but it is really quite easy to prove that the bulk of what they tell us goes back at least to the time of Socrates' friend Philolaus, if not to Pythagoras himself. Plato, as readers of the *Republic* know, had all this at his fingers' ends and liked to play with it in a half-serious fashion. Similarly no Pythagorean or Academic would have found the selection of 5040 as the number of citizens for the colony of the *Laws* as arbitrary as Mr. Barker seems to think it. Speusippus or Philolaus would have thought it obviously right, if you wanted a number with many divisors, to get it by securing one divisible by all the integers *ἐντὸς τῆς δεκάδος*, which was regarded as the natural "period" in numeration, and to secure this by taking the continued product of the numbers from 1 to 7 (the highest prime number < 10). In point of fact $\frac{5040}{2}$ or 2520 would also have the property of being divisible by every integer not greater than 10, but Plato, as a mathematician, wants a number which is formed *symmetrically*.

Mr. Barker's humour fails him, for once, over the *Menexenus*; of *course* the *Menexenus* is genuine. It is simply lack of humour which has led to doubts about it. It is a skit, and a very good one, on professional patriotic oratory, as Sir A. T. Quiller-Couch has recently explained. Germans and persons of the Germanic habit of mind are sadly perplexed by its ludicrous chronological blunders. How could Plato make Socrates talk of the events of 387? In point of fact, he has done worse; it is *Aspasia* whose speech Socrates professes to be repeating, and the supposed date is not long after the famous *ἐπιτάφιος* of Pericles for the victims of the first year of the Peloponnesian War! Of course this is intentional. The "jelly-bellied flag-flapper" is not usually strong on accurate chronology and it is his style of oratory which is being caricatured. Again, say the Germans, some of the reasons given for being proud

of your country are quite good, others are quite bad. What can we make of the work if we can neither regard it as all caricature nor as all earnest? If one has an eye for irony one ought to be able to understand without being told that even the "flag-flapper" does mix up some respectable reasons for patriotism with the discreditable ones and that any good caricature of his style of oratory must reproduce and accentuate the mixture. The argument that Athenians ought to make it a reason for admiring themselves that they have always hated the "barbarian" so bitterly is, of course, one of the bad reasons, and it is Plato's characteristic irony to mix it up with worthier topics. Mr. Barker really ought not to have worried himself with the question what light the remark throws on Plato's opinions about "barbarians"; he ought quietly to enjoy the art of the suggestion, as Plato meant he should.

I take it a reference to Samos (!) as the home of Protagoras is a mere slip of the pen, or perhaps the result of an "association by similarity" of the names Protagoras and Pythagoras. It is no doubt also a mere oversight that Zeno's invention of dialectic is ascribed in passing to Protagoras, who, according to Plato, came badly to grief the moment Socrates began to try "dialectic" upon him.

I trust these observations will not be understood as intended to detract in the least from what I have said about the very great excellence of Mr. Barker's fascinating study.

A. E. Taylor.

The Individual Delinquent: a textbook of Diagnosis and Prognosis for all concerned in understanding offenders. By William Healy, A.B., M.D., Director of the Psychopathic Institute, Juvenile Court, Chicago; Associate Professor, Mental and Nervous Diseases, Chicago Policlinic. London: Heinemann. Pp. xvii, 830.

It is difficult to speak too highly of this book, and that whether we think of its contents or of its methods of analysis and exposition. It is one of the best of the fine series in which it occurs—the Modern Criminal Science Series, published under the auspices of the American Institute of criminal law and criminology. This series has been devised with the catholic readiness of America in this branch of scientific practice to ascertain direct from the rest of the world what the experts have thought and said. But as one scans the various volumes, for example, Garofalo's *Criminology*, Tarde's *Penal Philosophy*, Lombroso's *Crime, its Causes and Remedies*, Gross's *Criminal Psychology*, De Quiros's *Modern Theories of Criminology*, Saleille's *Individualisation of Punishment*, one cannot help feeling every here and there that, in criminology as in so many other departments of civil practice, the broad generalities are strained by every ingenuity to cover what the refractory conditions

of the actual world appear to need for its preservation from something named "crime" and some individual named "criminal". In these admirable works, which, in a large proportion, have been wrought out of hard facts of experience, the philosophical student is forced into the middle of the old controversies about free will, responsibility, personal identity, modified in a hundred ways by modern views of the organism, heredity, and many other biological and sociological generalities. These all are fascinating; but their relevance in the world of criminology rests on the need for finding a coherent ethical reason for the practice of sending murderers to the scaffold or guillotine and delinquents of lesser grade to the appropriate prison or institution. The theories of crime and the criminal are as various as the philosophies invoked to justify them. But at present more than ever in the modern world it is essential to apply scientific method to the complicated facts. In the present treatment of delinquency, especially of juvenile delinquency, the misfits exceed the fits by a big proportion. It is the virtue of Dr. Healy's book that it prepares a scientific ground-work and keeps scientific throughout. There is no attempt to apply one sole principle to all types of case, nor is it admitted anywhere that there is one sole principle that will apply. His effort first and last is to secure an adequate analysis of the individual. The result is a textbook of the highest value both in method and in materials. "Out of deep consideration of hard-won facts this work is produced. In view of the failure of the past and of the present effectively to handle anti-social conduct, and in the light of the enormous expense of criminality, standing in striking contrast to recent progress in many other fields of human endeavour, there seems the utmost justification for research work in the underlying causations of delinquency" (p. 3). And again: "Of general theory there is no lack, but when we come to that study of the individual which leads to clear understanding and scientific treatment, there is almost no guidance" (p. 3). This is at once a severe comment on current speculation and a conclusive justification for the book.

Dr. Healy uses the terms "crime," "delinquency" as "overlapping and practically synonymous terms". The individual delinquent may be either a young offender or an older criminal. "The criminal is a person found guilty of a crime." Because "knowledge of growth processes is always important for understanding the fully developed state," the study of the beginnings takes first rank. But the delinquent's character, being the result of growth, is "the product of forces as well as the sum of his present constituent parts" (p. 4). He must be studied "dynamically as well as statically, genetically as well as a finished result." How fruitfully this conception is applied, only a detailed study of these eight hundred and thirty pages could demonstrate. It is quite impossible to give any sufficient impression of the wealth of material and analysis. Delinquency is not synonymous with abnormality. "Such statements as 'Crime is a disease,' appear dubiously cheap in the light of our experience" (p. 4). The task

has been less the gathering of material for justifications than the ascertaining of methods and facts "that will help towards the making of practical diagnosis and prognosis" (p. 4). But, incidentally, this severe restriction to practical ends is mediated by a comprehensive study and knowledge of all the leading authorities of every problem revealed in the close study of the many cases. The result is a book that should appeal not to parents alone but also to "teachers, pastors, and physicians, to whom the laity go so frequently for advice on mental and moral questions" (p. 6). But "the foundations on which delinquent careers are built . . . are not taught as yet in theological and medical schools, and are only just finding a place in psychological departments of universities and teachers' colleges. It would seem, however, that the phase of applied psychology which has to do with human behaviour should be essential in all these disciplines" (p. 6). Dr. Healy urges the need for instruction of all those concerned with the management of criminals. "As a basis for supplying a vaguely felt need for individualisation of treatment in institutions, comprehension of the genetics of misbehaviour is a prime necessity." His problem, therefore, is to show by a clear-minded application of specially designed methods of analysis, how we should endeavour to understand the beginnings and foundations of misconduct in general. "Only through logical, scientific study of the individual can there be any reasonable expectation of amendment of most delinquent careers" (p. 8).

The volume is built up of two books: one containing general data—orientations, nature of individual, mental bases of delinquency, working methods, statistics, conclusions, treatment—ten chapters; the other, containing discussions of heredity, factors in developmental conditions, abnormalities, stimulants and narcotics, environmental factors, professional criminalism, mental imagery, mental conflicts and repressions, abnormal sexualism, epilepsy, mental abnormality in general, mental defect, mental dullness from physical conditions, psychic constitutional inferiority, mental aberrations and peculiarities, pathological stealing, pathological arson—twenty-seven chapters. It is obvious that very little in the enormous range of delinquency in the widest sense escapes consideration, or illustration, and the documentation is based on nine pages of bibliography. Yet the whole book is so well composed that it does not contain a dull or irrelevant page. What I like best about it is that every generality is brought to the test of a case or cases. The facts, carefully analysed and recorded, are made to tell their story. The whole is predominantly a study in the psychology of crime and the book will take its place among the "indispensables".

The deliberate plan of the work is—"to ascertain from the actualities of life the basic factors of disordered social conduct" (p. 9). The data limiting the field of study include the following propositions: repeated offenders (recidivists) have, by their numbers and the seriousness of their offences, the greatest significance for

society; practically all confirmed criminals begin their careers in childhood or early youth; the determinants of delinquent careers are the conditions of youth; in youth prime causative factors stand out much more clearly than they do later; knowledge of developmental conditions is important; data about family traits, early characteristics and environment may be worth much for explanation of the offender's tendencies; disingenuousness of the offender is a barrier, and, therefore, for whole groups of causes, it is important "to approach the delinquent in the years of naïvete"; the best rewards of therapeutic efforts are from working with youth.

Of methods all that need be said is that they are carefully elaborated to suit the individual problems. The psychological methods include specialised mental tests. "It seems clear that the fundamental basis of standardisation must be comparisons of efforts of individuals who have done their best. All else is secondary; measurement of quantities, qualities and time of work presupposes this best effort. If the best was not obtained, then evaluation of output, since we desire to predict, is of little value" (p. 72). There are tests of the levels of general intelligence—modified Binet tests; tests for school work, special capacities, such as memory powers, ability to give testimony, attention, motor co-ordination, associative processes, perception of form and colour relationships, ability to profit by experience, suggestibility, will-power, apperception, moral discrimination. Psycho-analysis is freely used. "The whole structure of the phycho-analytic method rests upon one foundation—that for explanation of all human behaviour tendencies, we must seek the mental and environmental experiences of early life. If one traces back the driving forces of conduct in any normally minded individual, one finds their first springs so far away that the intervening links of relationship are not quickly perceived. Up through the aisles of time the mental individual has progressed by steps that are now forgotten, and by paths which may have been dimmed to consciousness in the passing. The psycho-analytic method, first and foremost, invokes retracing the steps which progressively formed the whole character; hence it bespeaks utmost value for students of social misconduct" (p. 116). It is well to have this sane deliverance on a method that has evoked so much futile virulence in controversy. In another connexion it is said: "No doubt the exploration, or bringing clearly to the offender's mind the innermost cause of his mistendencies, is the greatest single step towards a cure, but most often that is not enough" (p. 355). But I have said enough to show the immense value this book has for the educational psychologist.

Out of such wealth of suggestions, criticisms and concrete cases, it is difficult to select points for comment. One or two results are too striking to be missed. After a careful analysis of 152 cases, where the study was "centred on the problem of the direct inheritance of criminalistic tendencies as such" (p. 153), Dr. Healy concludes: "Altogether there seems to be no proof whatever from

our extensive material that there is such a thing as criminalistic inheritance apart from some otherwise significant physical or mental trait, which, in the offender and his forebears, forms the basis of delinquency" (p. 154). This, it is hardly too much to say, is the most important proposition in the book. Dr. Healy does not question the inheritance of conditions that, in a given environment, easily lead to criminality; what he does deny is the direct inheritance of criminalism as such. In all the cases where the investigators could come to close quarters with the family and individual history, inheritable defects, such as epilepsy, feeble-mindedness, instability, etc., were frequent; but we gather that the "criminal as such" is a fiction due to over-ready generalisation. "When we come to study cases more fully, we see no reason for maintaining any general notion that there is a class properly designated as born criminals" (p. 781). And again: "Nothing is gained by loose generalisation on the subject. There is much food for thought in Devon's keen statement that 'the criminal is born and made just as a policeman is born and made'. Certain mental and physical qualities lead in certain definite directions of behaviour if society allows the chance" (p. 782). The discussion of moral imbecility and moral insanity is among the acutest criticisms of the research. The chapter on Heredity, (pp. 188-200), developed and checked by the incidental discussions in other parts of the book, deserves the most careful study both of the psychologist and biologist. It is manifest that the difficulty of proving inheritance of criminalism is much greater than the ordinary criminologist realises.

Space forbids comment on many other problems here brought to the test—deliberate choice in criminalism, the nature of the mental imagery among criminals, the effects of repression in inherited hyper-sexualism, various types of mental defectives, the effects of alcohol and other drugs, which are frequently symptoms of pre-existing defect, the amnesias, the forms of paranoia and other insanities, the special effects of treatment, the futility of certain punishments, etc. If I were asked to recommend a well-loaded textbook as a guide to the study and treatment of the criminal, Dr. Healy's volume would be among the first that I should recommend.

W. Leslie Mackenzie.

VII.—NEW BOOKS.

The New Physiology, and other Addresses. By J. S. HALDANE, M.D., LL.D., F.R.S. London: Charles Griffin & Co., Limited, 1919. Price 8s. 6d. net.

DR. JOHN HALDANE has thrown together into a book six essays or addresses which he has had the good fortune to deliver to important audiences—to audiences both influential and varied, such as the British Association, the Harvey Society of New York, the Edinburgh Pathological Club, and the Aristotelian Society. All these essays deal, directly or indirectly, with Dr. Haldane's views regarding the fundamental concepts, or 'categories,' of biological science, the manner or degree in which biological investigation approaches towards 'reality,' and, by consequence, the question whether contact has been reached, or is still only to be desired, between (for example) experimental physiology and practical medicine. I say, these essays have been thrown together into a book, and I don't think the phrase is either misplaced or severe. They all, or practically all of them, say the same thing, in words which vary little; and the same illustrations, drawn from the phenomena of respiration or excretion, repeat themselves in one chapter after another. These illustrations, from Dr. Haldane's point of view, are doubtless strong and good, but we get a little tired of them before we are done.

Dr. Haldane avows himself, courageously, as a reformer; he is a hard critic of the scientific methods of our day; and he acknowledges that he represents a 'minority,' but whether that minority be large or small he does not tell. In some cases Dr. Haldane's views have already been earnestly, even elaborately opposed; but there is not a word in this book concerning any replies that have been made to him, any attempts to rebut his arguments or refute his conclusions. The question raised in the last chapter of this book, 'Are physical, biological and psychological categories irreducible?' is one which was discussed and argued at great length in last summer's 'Symposium'; it is all one to Dr. Haldane. He abates no jot or tittle; he says again precisely what he said before. But this is not the place or the occasion to recapitulate that argument, nor is it, save now and then, a reviewer's business to try to controvert his author. I am quite content to do no more, or very little more, than attempt to describe Dr. Haldane's general attitude, to express my dissent, and to do so with as little show of prejudice as I can.

This much may certainly be said, to begin with, that a good deal of what Dr. Haldane has to say is such, and is so said, as to disarm criticism and to invite our hearty approbation. Dr. Haldane's conception of the aims and duties of a physician is a fine and an exalted one, and with it I heartily agree. For Medicine is one of the greatest of the Arts; it studies Humanity, it has its spiritual side; and the physician by the bedside may at all times say, 'Behold, I show you a mystery'. Dr. Haldane tells us, and it is not to be denied, that 'there is a subtle barrier between practical medicine and the teaching of preliminary sciences'. He points

to the contrast between the textbooks of physiology, in which one 'finds an account of the mechanical and physical aspect of each bodily process taken separately,' and the somewhat vague but infinitely complex problems which confront the physician. There is a 'human physiology' which transcends the present teaching of the schools; and we rely, under the old symbolic name of a *vis medicatrix*, upon agencies of which our microscopes teach us little that is certain, and less that is adequate. He says hard things both of the modern physician and of the modern physiologist. He talks of 'the pompous ignorance of physiology and pathology which one meets so often among medical teachers in Europe'; he says that 'we shall soon be left behind in the medical sciences unless we can introduce radical reforms'. If he says hard things of the physician and of the physiologist, he has harder still to say of the anatomist, 'who has sold his scientific birthright for a sorry mess of systematic pottage'; and harder still, if it be possible, of the pathologist and of the pharmacologist. But he has guidance to offer as well as criticism; his advice is clear and practical; and when he reminds us, for instance, that the old Scots description of Physiology was 'the Institutes of Medicine,' he is enforcing a lesson which we had better remember, but are apt to forget. I have no quarrel with him when he asserts that 'practical medicine is based on a teleological conception of the working of the body,' a fact which is enough to explain or to excuse what lack there be of living contact between the science of the physiologist and the art of the physician. All in all, I like the essay on 'The Relation of Physiology to Medicine' the best in the book.

The greater part of the little book is taken up, in one way or another, by statements and re-statements of Dr. Haldane's cardinal position, that the growth and maintenance of the organism are not to be comprehended by the laws of chemistry and physics; that 'in physiology and biology generally, we are dealing with phenomena which, so far as our present knowledge goes, not only differ in complexity, but differ in kind, from physical and chemical phenomena'; and that 'the fundamental working hypothesis of physiology must differ correspondingly from those of physics and chemistry'. In maintaining this position, Dr. Haldane makes free use of the great concept of 'teleology,' a concept which modern science, and science ever since Bacon's day, has done its best to dispense with—though by means necessarily to deride. As a friend said to me the other day: 'It is not that we *deny* design in Nature, for that would be as unphilosophical as it would be presumptuous; but we no longer think we *discover* it'. But whether Dr. Haldane would countenance the word 'design' or not, he certainly maintains, not as a mere working hypothesis but as an essential criterion of biology, a teleological principle in physiology, by virtue of which 'regulation' is effected, a 'normal state' is maintained—and all goes well. He may avoid, at times, the use of the word 'teleology': as, for instance, when he says that 'Lavoisier's discoveries [when he compared the output of heat with the consumpt of oxygen in the body] did nothing in the direction of reducing to physico-chemical terms the *apparent teleological, or, as I should prefer to say, "physiological"* element in the phenomena of animal heat'. He is satisfied that 'the lung ventilation is regulated in accordance with the *requirements* of respiratory exchange'; and, again, that 'the blood-supply to various parts, like the air-supply to the lungs, is in reality determined by physiological *requirements*'. In short, the Aristotelian τέλος dominates the situation. A certain result, not only the maintenance of 'life,' but the maintenance of a 'normal' condition, has got to be attained; it is the τέλος, the 'final cause' (though that word Dr. Haldane never employs), and attained it is. That that is so, is the first if not the last word

of 'the New Physiology'. The 'normal' is a very subtle thing; it is 'the condition in which the organism is maintaining in integrity all the interconnected normals which manifest themselves in both bodily structure and bodily activity'; and 'the maintenance of the normal is something for which there is no place in the mechanistic physiology; since according to this physiology maintenance must be in ultimate analysis only an accident of structure and environment—a fitful will-o-the-wisp, which does not concern true science'. And, lest I misinterpret Dr. Haldane, or lest I represent him insufficiently, let me quote one passage more: 'The normals of a living organism are no mere accidents of physical structure. They persist and endure, and they are just the expression of what the organism is. By investigation we find out what they are, and how they are related to one another; and the ground axiom of biology is that they hang together and actively persist as a whole, whether they are normals of structure, environment, or life-history. In other words, organisms are just organisms, and life is just life, as it has always seemed to the ordinary man to be. . . . The attempt to analyse living organisms into physical and chemical mechanism is probably the most colossal failure in the whole history of modern science.'

There is no mistake about it. Dr. Haldane is in open revolt, and what he desires is a revolution in physiology.

But Dr. Haldane is much less clear when he tries to explain to us his reasons for discontent, and to my thinking he is not clear at all as to how the working physiologist should amend his ways and seek salvation. Dr. Haldane's own work is based, just like other people's, on careful and meticulous physical admeasurement and chemical analysis; but he finds that these methods, or these sciences, do not take him so far as he would go, do not even lead him to a useful and practical end. That they have played him false he does not say; but that they have failed to satisfy his wants he indicates again and again. He finds that progress along the old familiar lines is slow; he doubts the science of the orthodox; he despairs of the teaching of the schools. I begin to think of a certain 'stile that led into a meadow, on the left hand side of the way'; and of certain men who, because the way was rough in that place, chose to go out into the meadow. For Dr. Haldane seems curiously impatient. He knows, and no man knows better, that the physiologist has done great things by the help of chemistry and physics, and has made many a fundamental point clear which was before utterly obscure. But he seems to me inclined to forget that all this work is but the work of a very few score years, of a few short lives of men. And though we might all confess that now and then a physiologist has been apt to claim more for his science than it has yet actually achieved, yet I think that, on the whole, the biologist is just as well aware as most men that he is still only 'picking up pebbles on the shore'. To revolt against the whole accepted concepts of his science because its results are far short of what we might desire, to advise the physician to be content (as anything other than the merest temporary measure) with a *vis medicatrix*, the anatomist with a *vis sculptrix*, the physiologist with a *vis directrix* (as Dr. Haldane in each case would have us do), is mightily like a return to mediævalism, and a going aside into the meadow, from 'the right way which was rough'.

The real fact is, or so it seems to me, that Dr. Haldane is in revolt with much more than the tenets and the methods of the modern biologist; it is a larger philosophy that he has in mind, and his challenge is to the world. He admits that his conception of biology is 'inconsistent with the physico-chemical conception of the universe'. But his conclusion appears to be—so much the worse for our physico-chemical conceptions of the universe. He 'confidently predicts' (and herein, as it seems to

me, there lies the very essence of his philosophy) that if a meeting-place between physical science and biology be some day found, and 'one of the two sciences be swallowed up, that one will not be biology'. He asks us 'What is reality'? and reminds us (somewhat needlessly, as I venture to think) that 'scientific generalisations represent, not reality itself, but only certain aspects of it'. 'They are the tools with which we fashion the world of sensuous appearance, and in the fashioning of it reveal its spiritual reality'. Of all this I would not gainsay a word; but as a working biologist, it does not help me at all. I have read this book all through; and in the end I resolutely decline to be fobbed off (for that is the only word I can think of) with either a *vis sculptrix* or a *vis directrix*, or even with a concept of 'teleology' as a working hypothesis, a guiding clue through the labyrinths of natural phenomena. The physiologist is not ignorant of the fact that it is not Reality which he studies, but only a certain aspect of reality; nevertheless, that aspect is *his* aspect, and within it his *métier* lies. Dr. Haldane writes up at his stile, 'This way to Reality'; but I will not travel through his meadow till he has set up a few further sign-posts, and some milestones by the way.

In some things biological I also am inclined to be a heretic, and certain of my doubts might alarm and horrify Dr. Haldane himself. He seems to me to have no doubts whatever as to (for instance) the 'cell-theory,' or the main principles thereof; it is, indeed, the very fact the cell-theory renders a 'mechanical explanation' of the whole organism so superlatively complex that seems to me to form one of Dr. Haldane's chief arguments for rejecting the mechanical concept. How far I am inclined to doubt, or even to reject the 'cell-theory' (as commonly understood) is neither here nor there; but I am entirely willing to look upon it as a 'temporary hypothesis'. But I am not willing to reject as a fundamental concept of experimental science, as a working hypothesis of the physical universe, the concept of mechanical causation. This, unless I grossly misunderstand him, is what Dr. Haldane bids me do; and I protest, if only in an evasive answer, that it is not biology which he is trying to reform, but the current thought of the world.

D'Arcy Wentworth Thompson.

A Realistic Universe, An Introduction to Metaphysics. By John Elof Boodin. New York: The Macmillan Co., 1916. Pp. xxii, 412.

Prof. Boodin's Preface tells us that "this volume on metaphysics is the sequel of a volume on the theory of knowledge, entitled *Truth and Reality*, which was published in 1911. The two volumes furnish a survey of the field of general philosophy from the point of view of pragmatic realism." Its attitude is "an attempt to apply scientific method to philosophic problems," and "the pragmatic method as applied to metaphysics means that we must judge the nature of reality . . . by the consequences to the realisation of human purposes, instead of by *a priori* assumptions". From his introductory chapter we learn further that metaphysics, since to philosophise we must think, implies that there are valid rules of thought, and "a faith in their fitness or relevancy to our world" (p. xv). Unlike Mr. H. G. Wells, he entertains no 'scepticism of the instrument,' but thinks "we must trust the instrument at the outset," which is "fundamentally an attitude of the will". So "somehow the laws of thought must be the laws of things," but they "must be tested by their success in actual use" (p. xvi). So our "faith in the relevancy of thought," must be confirmed. Similarly, though philosophy "exists in part for ennobling life," and "must satisfy our emotional and volitional nature, as well as

our intellectual," it is yet "science not art," nay "the oldest of the sciences—the mother of science". Actually, however, Prof. Boodin's method is to attempt to solve the problems of metaphysics by selecting five scientific conceptions now current, and following them whithersoever they lead. These he believes to be irreducible into terms of each other (p. 385), and regards as "the *summa genera* in the reflective evaluation of the character of the world" (p. 391).

His list is composed of (1) *Being*, "the stuff-character of reality"; (2) *Time*, "the flux-aspect" of reality; (3) *Space*, which is "more than a conceptual limit," since "interstellar space seems to be practically pure"; (4) *Consciousness*, since "it is absurd to suppose that our conative attitudes and organised meanings become atoms and molecules when we are not aware of them," and which is conceived as "a neutral light," that "does not create distance nor does it create meaning" (p. 399), and is "always an aspect of the situation which we call *interest*" (p. 400); (5) *Form* or direction, which raises the question of validity, and "must somehow condition the survival of structures" (p. 403).

Now it is evident that a method like Prof. Boodin's has very considerable attractiveness. To make the achievements of modern science relevant to the secular perplexities of philosophy gives to metaphysics an air of solidity in which its fine-spun speculations have usually been lacking, even though Prof. Boodin's five categories may look to some like five bluebottle flies caught in a web of gossamer, and suggest a doubt whether it can sustain such weighty bodies. However, Prof. Boodin writes with a refreshing sense of realities, and with a praiseworthy clearness and directness of style, and is withal so good tempered and tolerant about his metaphysical selections (as a genuine pragmatist should be!) that he very effectively disarms his critics. Hence the remarks that follow should be taken less as objections than as inquiries and cues for reflexion.

So long as a philosopher shrinks from undertaking the (probably futile) task of 'deducing' his categories and supplying a rigid proof (almost certainly impossible) of their ultimateness, he cannot in reason require every one to approve of his selections, and has in principle to admit that as systematic, impressive and satisfactory structures can be erected out of different materials as out of a different arrangement of the same materials. Tastes differ in metaphysics as in love, and Prof. Boodin's 'Big Five' do not appeal to every one. Thus 'Being' has seemed pretty null and void to others besides Hegel. Moreover, 'Value' penetrates it, transforms it, and perhaps finally absorbs it. 'Change' is the presupposition both of 'Space' and of 'Time' and pervades them both; it seems clear that the experience thereof is far more ultimate than the abstractions out of which we build up our scientific conceptions of Space and Time. 'Consciousness' is either mere philosophic jargon, or the thinnest possible abstraction from concrete personality, while the latter may be found in ultimate analysis to be as all-pervasive as 'Value'. 'Form' is a category which it was natural for the artistic craftsmanship of Greece to hit upon, but it has never shown itself susceptible of scientific definition. So it was never fully analysed and remained full of picturesque obscurities. Since then it has developed an abundance of tantalising ambiguities and become as elusive as 'validity' or 'law'. To justify its prerogative use, it hardly suffices to declare that "Plato and Aristotle have shown that in higher ideal realisation it is not necessary that the form itself should move in order to produce movement, that is, that the form should possess energy. The beloved may be indifferent to the lover. Beauty moves us by its perfection" (p. 378). Only, surely, if it does not disdain to reveal itself to us. And if it reveals itself in any way, if only by agitating ether waves, it *is* moving and acting on us in the scientific

sense. So that the 'unmoved mover' no longer has any scientific meaning.

But an even more fundamental question may be raised about Prof. Boodin's method. Our existing stock of ideas, including not only those with a recognised scientific status, but also those employed by common-sense, and the ideals, idols, and speculations of philosophy, has been accumulated by our past dealings with reality, and has resulted from our protracted efforts to come to terms with it. The most, therefore, that can be claimed for our ideas is that they should be adequate, *collectively*, to the manipulation of the world for human purposes. But it does not follow from this contention either that any particular selection from them should be adequate, or that, having been evolved for different and only distantly related purposes, they should all be concordant and consistent with each other. Accordingly, we find that different methods suit different subjects (*e.g.* mechanism and teleology), that conceptions used in different subjects are incompatible with each other, and that conceptions may continue in use which are inherently self-contradictory, *e.g.* that of an omnipotent and yet benevolent deity. For if a conception is a psychological conflation of emotional demands and vital attitudes, this is quite natural; its 'self-contradiction' will then merely embody the conflict in the soul that generated it. Such discrepancies, however, are not a serious scientific inconvenience: for the sciences do not claim finality for their conceptions, and can continue to cherish the hope that they will hereafter grow harmonious, while in the meantime the use of one conception for one purpose does not exclude the use of another for another. Metaphysical systems, however, in so far as they aim at consistency, must make selections, and selections imply alternatives, and alternatives a reference to desirability and comparison of values. Does it not follow that no metaphysic that has relation to any empirical material can lay claim to cogency or finality?

It has, however, like every scientific conception, a duty laid upon it which it cannot disclaim. It is bound to make quite clear and unmistakable the meaning it attaches to the terms it operates with. And it will usually be found that metaphysicians leave some of their essential terms in impenetrable obscurity. In Prof. Boodin's case this obscurity would appear to surround especially his notion of 'validity'. In particular its relation to 'value' is not explained, though page 188 makes a convenient distinction between 'value' (subjective), and 'worth' (objective). According to page 137, value is 'made possible' by 'consciousness,' which here does not seem quite so 'neutral,' as it is officially supposed to be. But how is 'value' related to 'validity'? 'Validity' would seem to be objective; yet on page 340 it has degrees, like 'value'. And on pages 339-41 we are treated to the old Platonic contention against Protagoras, dog-faced baboon and all. There must be an absolute standard, absolutely 'valid'; for otherwise the possibility of 'validity' is denied, "all argument must stop," and "one opinion is no truer than another". If no notice is taken of the Protagorean reply which, as I have shown in my *Plato or Protagoras?* is given and *not* refuted in the *Theaetetus*, the logical conclusion is that "radical empiricism is impossible as our ultimate philosophy," because with it "no ideal could be valid". Thus 'validity' becomes vital to Prof. Boodin's scheme, and the *deus ex machina* which assures it is 'form'; but I can find no reason why 'forms' should pre-exist, and not be formed, and transformed, in the process of the real, or why 'validity' should not arise in the course of experience out of agreements about values.

A similar obscurity besets Prof. Boodin's "valid rules of thought," and the dictum that "metaphysics implies logic" (p. xv). Aye, but what sort

of logic? The traditional Formalism, which sacrifices all meaning to a 'validity' it utterly fails to realise? Or a more reasonable sort, which prefers the real values of 'material' truth to unsatisfied craving for 'formal validity,' and is content to conceive its 'laws' as the postulates of intersubjective intercourse which can be *hypothetically* applied to the world of things and used successfully to calculate the behaviour of *some* of them for some purposes? I cannot but feel that there are dark corners in Prof. Boodin's 'realistic universe' which have never been illumined by the sunlight of a thoroughgoing pragmatism.

F. C. S. Schiller.

Religion and Philosophy. By R. G. Collingwood, Fellow and Lecturer of Pembroke College, Oxford. London: Macmillan & Co., 1916. Pp. xviii, 219.

"This book is the result of an attempt to treat the Christian creed not as dogma but as a critical solution of a philosophical problem," so writes Mr. Collingwood in his Introduction. For him, as for an old Apologist, Christianity is simply true philosophy. His work falls into three parts: (i.) "The General Nature of Religion"; (ii.) "Religion and Metaphysics"; (iii.) "From Metaphysics to Theology". In developing his own views Mr. Collingwood's method may be best described as dialectical. He advances to the solution of the problem on hand by a discussion and criticism of faulty or inadequate theories on the subject, and so strives to reach a truer and more complete conception. He conducts his argument with perfect urbanity. Controversy in his hands never assumes a personal tone, and he is more concerned with ways of thinking than the manner in which they are represented by particular thinkers.

As the present writer finds himself at variance at many points with the author, he should perhaps say at the outset, that the book is able and thoughtful, marked by great lucidity and precision of style as well as by considerable independence of mind. And though the volume is not a large one, it is a careful, deliberate, and considered contribution to the subject.

According to Mr. Collingwood the centre and foundation of religion is creed, and every religious creed is a view of the universe. Religion is no doubt conduct too, but conduct implies knowledge: religion is also feeling or emotion, but feeling is meaningless apart from intellectual activity. Religion, therefore, in its intellectual aspect is theology, and theology is not an external superstructure built upon religion.

Here the writer exaggerates the intellectual side of religion, and seriously underrates the importance of feeling. It is true, however, that theology is not an excrescence on religion, for every religion that reaches a certain stage of development must articulate itself in doctrines. Yet theology is not the religious experience but its reflective interpretation. One consequence of Mr. Collingwood's translation of religion into a theory of God and His relations to the universe is, that he recognises no difference between the philosophy of religion and philosophy in general. To this one would reply that the religious experience is something specific, and it is desirable to distinguish a philosophy of religion, which gives a speculative interpretation of that experience, from philosophy which deals with experience as a whole. For Mr. Collingwood the distinction is superfluous, since he denies there is anything specific in the religious experience: religion is simply a thinking and an active life in one, and "whatever is life at all for that very reason is religious in its degree". On this theory it is not evident why the religious and the secular should ever have been differentiated.

In his chapter on "Religion and History," Mr. Collingwood's aim is limited; and he is mainly concerned to show that history should not be overrated, and that a historic positivism cannot solve the problems of religion.

In his second part, Mr. Collingwood discusses the Proofs of God, Matter, Personality, and Evil. In regard to the traditional Proofs he pertinently remarks: "Before proving God, it might be profitable to ask what is meant by God". One feels, for instance, that the Ontological Proof, so far as it has a shadow of validity, is useless in a religious interest. The two following chapters are important, for the writer develops in them those ideas of the relation of God to the world and man in the light of which he interprets religion. I must confine myself to one or two essential points. With the criticism of materialism, that it is right in affirming a reality beyond the power of the individual mind to alter, but wrong in describing the objective world as something aloof and apart from mind in general, few will find fault. In the chapter on Personality Mr. Collingwood puts forward certain ideas which have an important bearing on his speculative conclusions, ideas from which many will dissent. If two minds, he holds, think the same thing and will the same thing, the distinction between them has given place to an identity: difference is overcome. He further argues that the self of a thing cannot be distinguished from its relations. In the human mind we are invited to see a type of the self-identity of God, and in the identification of two human minds a type of the identity of God's mind and man's mind. The argument, if not quite novel, is far from convincing. To say that the self of a thing is indistinguishable from its relations leaves it totally inexplicable how these specific relations are sustained. And to affirm that two minds, in so far as they think the same thing, become identical is to ignore the fact that the two thoughts are not precisely identical, and that each mind maintains itself as a separate centre of interest and value. If we do justice to the unique self-feeling, we cannot suppose that one consciousness can fuse with another in this way. From this theory, however, the writer deduces his theory of God as up to a point identical with the totality of human spirits, yet only identical in the fullest degree when these minds know the truth and will the good. In other words God is transcendent only in the sense that He is already all that man can attain.

How is this theory compatible with the existence of evil in the universe? Mr. Collingwood does not take refuge in a supra-moral Absolute. Nor does he suppose that evil is merely a means to good, for this, as he says, does not make the bad will of the agent good. In seeking to solve the question he finds a parallel in the problem of error. Mr. Collingwood accepts the principle that all thought is thought of reality, and on this presupposition it is hard to see how any real explanation of error is possible. His view amounts to this. Error exists, but it exists in a partially unified world. In the degree that all things are related to one another in a totality or system, error is expelled by truth. And in so far as the world becomes a totality or moral cosmos, the evil elements in it are expelled by the good. In the process of attaining this totality God is being realised; and we have the paradoxical conclusion that God does not permit evil but overcomes it. The writer, we note in passing, has nothing to say on the difficult question of the distribution of evil. It is true that evil exists only in an environment of good, and is a challenge to the good to overcome it. But if evil is not a means to the good, as we are told it is not, one cannot see why, on Mr. Collingwood's principles, it should be there at all. For moral evil is essentially that which ought not to be. On the other hand, if moral evil is accepted as a fact, no one will

deny that the development of a moral universe implies its progressive elimination. But this does not cast light on the problem of its existence.

When he turns to theology, Mr. Collingwood tells us he does not aim at orthodoxy—which is evident—but only at translating his philosophical results into theological terms. In this part he takes up the ideas of Incarnation, Redemption, and Miracle. If we bear in mind the conceptions of God and personality already touched upon, we shall find the theology of the book is an application of these principles.

I should like to say in closing, that Mr. Collingwood's method of bringing speculative principles from without and applying them to Christianity is unsatisfactory and apt to mislead. It would be fairer if he developed his own theology in independence of the forms and language of Christian theology.

G. Galloway.

The Good Man and the Good. An Introduction to Ethics. By Mary Whiton Calkins. New York: The Macmillian Company, 1918.

A book from the pen of Prof. Calkins may be said by this time to carry something of its own introduction with it. It is sure to exhibit the marks of a highly skilful teacher, bent on tracing a clear path for us through all the intricacies of a philosophical subject with a firm and practised hand, and leaving us with something of a possession at the end. It may not exactly be fitted to compass the salvation of the whole soul. That would require a capacity of combining interest and inevitableness (both at their highest intensity) in the same argument, a power of giving convincing quality to a wondrous tale, a power of making sober truth of an arresting story, of proclaiming a veritable new evangel with such an air of simple cogency that it seems just plain truth, and "the only possible way things can be". That kind of power is probably reserved for the masters in philosophy; and they are not many in a century. But Prof. Calkins is one of the writers of whom we may be sure at least that their story will be given an interest, if it be not an evangel; and if it do not represent *the* way things *must* be, it will at least give the reader the impression of having represented one way they could be. In other words, the game of thinking will be played. Her findings will be presented as though they were really expected to have a claim on our intellectual assent; and whatever we may think of their truth, their being true or otherwise will be at least a point which seems to matter. The consequence is that the ultimate result, whether welcome or otherwise, will remain to the inquiring mind a thing of solid value.

The book before us appears to have pretty well sustained this character. The aim of being at once concrete and systematic is written all over it; it shows plain traces of the attempt, on the one hand, to deal, in a book on ethics, with ideas which are relevant to the moral problems of actual life; and on the other hand, to exhibit some unity of principle in the treatment.

The matter of the book carries out precisely what the title promises. There are two directions in which we may seem to find the solution of the problem of the moral life. We may find it in the man who fulfils his sense of obligation; or in the man who wills what is really good. These two, the good man and the good, while they are made especially the themes of the first two chapters, are generally the subject of the whole treatise. The whole falls naturally into two halves, five chapters dealing with the good and five with the good man in his various concrete forms. A concluding chapter discriminates the field of ethics from the adjacent fields of æsthetics and religion. This is followed by some pages of notes,

an index and a register of names, forming altogether a useful compact well-arranged little volume of some 200 odd pages. It ought to fill a useful place as an introduction to the study of ethics.

The chief contention of the book appears to lie in the view that the good must be all-inclusive, both "numerically" and "qualitatively". Numerically considered, the good is "neither myself nor any one 'other self,' nor any restricted group of others, but the all-inclusive, vitally related, society of selves" (p. 67). Qualitatively, the good is not to be described in terms of "any one kind of consciousness, as pity, loyalty, wisdom or happiness". It is to be "inclusive of all these experiences and of all others which people wish or will for themselves". A difficulty in the argument seems to us to lie in the fact that no reason appears to be offered *why* the good should be all-inclusive. This would not be so pressing a matter, were it not also said that there is no reaching the person who is convincedly of another mind. It is insisted that the person who "honestly, intelligently, and fixedly," holds a contrary idea of the supreme good to ours, "rightly gains exemption from the requirement to explain his position". The difficulty seems to us to spring from the use made of the Aristotelian doctrine that the true good is that object or end of will for the sake of which all other things are willed. It is quite true that an end which is thus self-sufficient is self-explanatory. But insuperable difficulties are unavoidable if we assume, as the author appears to do, that an end is self-sufficient because someone happens to take it to be so.

The second half of the work is devoted, in the author's words, to the deepening and enlargement of the view of the good thus attained. This involves the study of the various concrete shapes of the virtuous life; the study which, in the author's view, chiefly saves ethics from inutility. Virtues are instinctive tendencies controlled; controlled through the instrumentality of habits. On the basis of a certain grouping of instinctive tendencies, a grouping made for the purposes of ethics, which regards them as divisible into two—(*a*) those either individual or social and (*b*) those inevitably social—a study is made of the corresponding virtues which these tendencies, when controlled, become; virtues (*a*) either individual or social (chap. VII.), and (*b*) essentially social (chap. VIII.-X.). Throughout the treatment, the good towards which the instincts are to be guided by the controlling habit remains the same—"the full and complete experience of the universal community of selves".

We should not wonder if these chapters, with their pervading Aristotelianism, enriched and fructified by modern instinct-psychology, should prove to many the most interesting chapters of the book. Some will find it bracing, *e.g.* to be told for once, in an ethical textbook, that explicit lying is always wrong; and many will agree profoundly with the author's contention about justice, that in practice it demands not general knowledge, but individual knowledge, and will sympathise much with Prof. James's crab, which will not have it that it is a crustacean, "I am no such thing, I am MYSELF, MYSELF".

The concluding thoughts on the fixing of the landmarks around the ethical field are probably rightly placed at the end of the discussion. But the emphasis laid on personality there, brings us back to what we cannot but regard as the pervading imperfection of an otherwise strenuous and helpful and excellently "documented" little book. The moral attitude is differentiated from the aesthetic in that its object is personal; and from religion in that its object, though personal, as that of the latter also is, remains strictly human, while religion characteristically deals with a being or beings whose personality is more than human. Now it seems to us that there is an assumption running throughout the book that the good cannot be properly personal unless it leaves each person in undisturbed

possession of his own supreme "personal" convictions. But surely you may modify these and still leave the individual a person. The only way in which a modification of his opinions would be an invasion of his personality, would be if you refused to take him on his own ground. To take him on his own ground, however, is exactly what the author will not allow us to do. She always assumes that a person's supreme good may not be all-inclusive and may yet be self-justifying. In other words, she assumes the possibility of an ultimate plurality of goods. If so, ethical argument seems to have no standing-ground, and nothing seems to be left but to insist arbitrarily that *besides* being self-justifying a man's good shall also be all-inclusive; which arbitrariness of procedure is the only invasion of his personality which there seems to be any reason to fear or any call to avoid.

J. W. Scott.

The Next Step in Religion: an Essay towards the Coming Renaissance. By Roy Wood Sellars, Ph.D. New York: The Macmillan Co., 1918. Pp. 228.

The American author of this volume is profoundly dissatisfied with current religion and Christian theology: he seeks to show the far-reaching reform, or rather revolution, which religion must undergo, if it is to become a vital element in social life. The book is clearly and vigorously written; moreover, Dr Sellars is well-informed, and very confident in his own principles and results. His work, with its clear-cut and uncompromising conclusions, may influence those who are out of sympathy with dogmatic theology, and especially when they do not realise the magnitude and difficulty of the problems at issue. Some of the criticisms of the book are no doubt justified: but the argument savours much of *parti pris*, and as the author covers a wide field in little more than two hundred pages, his discussions are rapid and slight. Thus the work contains sections on Primitive Religion, Magic and Ritual, Cosmogonies, Christian Origins, Catholicism, and Protestantism, as well as chapters on the Problem of Evil, and on Immortality. It concludes with a sketch of the kind of Humanistic Religion which commends itself to the author.

It is impossible within the limits of a brief notice to enter into detailed criticisms, but two general remarks may be made. Dr. Sellars in his method resembles the Deists; by systematically purging current religion of false accretions and superstitions, he tries to reach a valid residuum. In the process God, immortality, and worship vanish, and only devotion to social good and mundane spiritual ideals remains. The essence of religion is not to be reached in this way. Moreover, the writer tends to confuse throughout the question of historic origin with that of validity, and to suggest that the myths and superstitions interwoven with primitive religion somehow prejudice its higher development. Thus theological doctrines are rejected because, on the one hand, they grew historically out of a primitive and animistic view of the world, and, on the other, because they are not justified by what Dr. Sellars calls the modern scientific consciousness.

The second remark is, that Dr. Sellars does not always draw the conclusions from his own naturalistic premises. Why, for instance, should he talk of the need of devotion to spiritual ideals, when from his own standpoint he should only speak of pleasure-values? Again, what ground has he for his optimism about the future of the race and its progress under his new religion? For he will hear of no providential order which embraces the natural and the spiritual worlds, and secures the subordination of the former to the latter.

G. G.

The New State : Group Organisation the Solution of Popular Government. By M. P. FOLLETT. Longmans, 1918. Pp. vii, 373. 12s. 6d.

This seems to me a very excellent book. Its subject is in a sense an old one, the "state" considered as a "collective" will. But the treatment, which claims to be new, is, I think, at least in detail and exposition, an advance on any other with which I am acquainted. Its characteristic points, as I understand them, are : 1. A total repudiation of the crowd or herd theory of society, and, with it, of "ballot-box democracy," and its replacement by the group theory (typified by the working of a first-rate committee). 2. The search for the individual and his will as something created by the integration of differences and realised only in his inter-relations. 3. The contribution to this end of the practice of "the art of living together" in the daily contact of groups, of which the neighbourhood group and the occupational group are carefully studied, the former especially being treated in much detail drawn from recent American experience.

The position of the occupational group involves a discussion of recent forms of pluralism, to which the authoress assigns, as I read her, the leading value among present-day movements, while insisting that the force or spirit of wholeness, which is the mainspring of all group-formation, cannot stop short of forming a state (necessarily federal) to begin with, and then a world-state. The "state," it is urged throughout, is *unifying* not *unified*. It is the inherent principle and attendant consequence of the "art of living together," and sovereignity is not a relation of some to others, but what every "whole" is essentially in its recognition of itself and for itself. Citizenship, therefore, is not an acceptance of an existent fact, but a continual creation of a living expression. The emphasis of the book is on the "new" democracy as involving a "new" psychology which will be instrumental to the practice and experience of the (almost "new") art of living together, and drawing the fullest profit from each others' differences by integration, *not* spreading similarities by imitation.

Of course, much appears open to criticism, but the substantive contention seems to me both true and fertile, and the book is very well written.

BERNARD BOSANQUET.

Man's Supreme Inheritance, Conscious Guidance and Control in Relation to Human Evolution in Civilisation. By F. MATTHIAS ALEXANDER. With an Introductory Word by Prof. John Dewey and Appreciations received from Prof. Frank Granger, Rev. J. H. Jowett, Prof. H. M. Kallen and Prof. John Dewey. Methuen & Co., London, second edition, revised, November, 1918. Pp. xxviii, 239.

At first sight this book appears to be merely a piece of propaganda on behalf of the author's scheme of 'breathing exercises' and the like, and a warning against the inferior methods practised by the Yogis and others ; but it is not easy on this theory to account for the distinguished list of sponsors who commend it in somewhat extravagant terms. When John Dewey is found to say (p. xxii) that the author "is the only person I have ever known, or known of, who knows what he is talking about in the sense a competent engineer knows when he is talking about his specialty," one inclines to think there must be something wonderful in the book It has, however, eluded the writer of this notice, and perhaps the solution of the mystery is that some of the pragmatists have felt the need of equipping their doctrine with a practical corollary which should be related to it somewhat as 'Christian Science' is to Idealism, and should satisfy the human craving for 'faith-cures' by a pragmatic and functional equivalent.

Received also :—

C. T. Lewis, *A Survey of Symbolic Logic*, University of California Press, pp. vi, 406.

J. Watson, *The State in Peace and War*, Maclehose & Sons, pp. xii, 296.

Sir Henry Jones, *The Principles of Citizenship*, Macmillan, pp. viii, 180.

K. K. Kawakami, *Japan in World Politics*, Macmillan, pp. xxvii, 300.

Giovanni Marchesini, *Lo Spinto evangelico di Roberto Ardigo*, Zanichelli, pp. 122.

Ludwig Stein (trans. by Shishirkumar Maitra, M.A.), *Philosophical Currents of the Present Day*, vol. ii., pp. iii, 158, University of Calcutta.

Henry Sidgwick (with preface by Rt. Hon. Viscount Bryce), *National and International Right and Wrong*, Two Essays, pp. 77, George Allen & Unwin.

T. F. Walshe, *The Principles of Christian Apologetics*, pp. xv, 252, Longmans, Green & Co.

Frank Watts, *Echo Personalities*, pp. 111, George Allen & Unwin.

G. Pitt Rivers, *Conscience and Fanaticism*, pp. xiii, 112, Heinemann.

P. Decoster, *La Réforme de la Conscience*, pp. 91, M. Lamertin, Bruxelles.

P. E. B. Jourdain, *The Philosophy of Mr. B*rtr*nd R*ss*ll*, pp. 96, Allen & Unwin.

F. Densmore, *Teton Sioux Music*, Bureau of American Ethnology, Bulletin 61, pp. xxviii, 561, Govt. Printing Office, Washington.

Albert Kaploun, *Psychologie générale, tirée de l'étude du rêve*, pp. 205, Librairi Payot et Cie, Lausanne.

F. C. Sharp, *Education for Character*, Indianapolis, Bobbs, Merrill & Co., pp. 483.

F. B. Shaw, *Lectures on the Philosophy of Mathematics*, pp. vii, 206, Open Court Co.

F. W. Scott, *Syndicalism and Philosophical Realism*, pp. 215, A. & C. Black.

R. B. Perry, *The Present Conflict of Ideals*, Longmans, Green & Co., pp. xiii, 549.

Will Durant, *Philosophy and the Social Problem*, pp. x, 272, The Macmillan Co., New York.

Catalogue of Lewis's Medical and Scientific Circulating Library, New Edition, revised to end of 1917, London, H. K. Lewis & Co., 1918, pp. 491.

C. C. F. Webb, *God and Personality*, George Allen & Unwin, pp. 281.

R. S. Carroll, *The Mastery of Nervousness*, New York, Macmillan & Co., 3rd edition, 1918, pp. 348.

E. H. Hirst, *Self and Neighbour*, Macmillan, pp. ix, 291.

H. E. Sampson, *Theou Sophia*, Kegan Paul & Co., pp. 362.

R. Rusk, *Experimental Education*, Longmans, Green & Co., pp. viii, 346.

VIII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. xxvii., No. 5. **A. Lalanue.** 'Philosophy in France, 1917.' [Reviews works centering about the notion of right (Anthony, Grasset, Davy, Lévy-Ullmann), the league of nations (Leroy, Milhaud, Buisson), German philosophy (Papillaut, Sartiaux), and psychology (Dugas, Joteyko, Bernheim, etc.). Appreciation of Le Dantec and Durkheim.] **H. N. Gardiner.** 'The Psychology of the Affections in Plato and Aristotle: I. Plato.' [Outlines the pre-Platonic and the Platonic doctrines. Plato's theory was developed in relation to the ethical controversies of his time, and was conditioned by current conceptions as well as by his whole ethical and metaphysical philosophy. He is more thorough than his predecessors, but his analyses and inductions are imperfect and his conclusions inconsistent.] **G. Cator.** 'Theism as an Intellectual Polity.' [Maintains that, if we draw a characteristic curve of the path of human intelligence, then the ordinate of this curve giving the highest noetic value or the greatest amount of wisdom is that erected on the abscissal point marked 'theism'.] **R. W. Sellars.** 'On the Nature of our Knowledge of the Physical World.' [Knowledge is not apprehension of the physical existent, but the interpretation of that existent in terms of propositions based on the (mental, subjective, personal) material which corresponds with the existent.] Discussion. **R. F. A. Hoernlé.** 'Notes on Professor J. S. Mackenzie's Theory of Belief, Judgment, and Knowledge.' [The distinction of truth and correctness; the problem of doubt; the notion of objective orders; the antithesis of belief and knowledge.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.—Vol. xxvii., No. 6. **L. J. Henderson.** 'Mechanism from the Standpoint of Physical Science.' [Critique of Driesch and Haldane. Organisation is not fatal to mechanism, which the writer therefore provisionally accepts.] **H. S. Jennings.** 'Mechanism and Vitalism.' [Argues that the principle of experimental determinism, characteristic of inorganic science, is adequate to the phenomena of life, even if consciousness is more than epiphenomenon, and even if we take a biocentric view of the universe.] **H. C. Warren.** 'Mechanism *versus* Vitalism in the Domain of Psychology.' [The case against mechanism rests negatively on inconceivability, and positively on the facts of organisation, voluntary selection, and teleology. The two latter facts are of a psychological order. As regards volition, we cannot demonstrate the falsity of animism, but we can say that the evidence is consistent with determination by physico-chemical antecedents. Nor is there anything in teleology (distant reception, memory, anticipation) that cannot be brought within the mechanistic programme.] **W. T. Marvin.** 'Mechanism *versus* Vitalism as a Philosophical Issue.' [Philosophy cannot decide which hypothesis is 'true'; it can, however, trace consequences. Civilisation, enlightenment, man's mastery of his destiny, all depend upon a mechanistic philosophy. Vitalism, however, is valuable as an empirical check on mechanistic rationalism, as a protest against over-simplification, and as a reminder of the factual presence of the

teleological.] **R. F. A. Hoernlé.** 'Mechanism and Vitalism.' [Vitalism is to be rejected on its merits; but so is the whole disjunction of mechanism and vitalism, for which we must substitute the conjunction 'mechanism and teleology'. Teleological terms are needed, not as substitutes for physico chemical, but as fixing the 'dominant' character of life-processes, to which their physico-chemical aspect is subsidiary. This position squares with that of Jennings, but insists on the distinctive nature of biological structures and processes.] Discussion. **F. Thilly.** 'The Kantian Ethics and its Critics.' [Defence of Kant against F. Adler's *Ethical Philosophy of Life*.] Reviews of Books. Notices of New Books. Notes.

Psychological Review. Vol. xxv., No. 4. **H. B. Reed.** 'Associative Aids: II. Their Relation to Practice and the Transfer of Training.' [Associative aids disappear with practice, and condition rate of improvement. They facilitate the formation of new responses but delay those that have become mechanised. Transfer of training must be explained by common associative bonds: Thorndike's theory of identical elements thus receives a specific meaning. The law of contiguity presuposes active attention.] **R. Pintner.** 'Intelligence as Estimated from Photographs.' [Photographs of 12 children, ranging by test from supernormal to feeble-minded, were ranked for intelligence by physicians, psychologists, students, teachers, and a miscellaneous group. In gross result, chance coefficients are about as good as those of the judges. The value of objective test is thus indicated.] **C. Rosenow.** 'The Genesis of the Image.' [The child prattles continuously, with attention on the activity. If the activity is inhibited, as by direct command of authority, the conditions are ripe for the genesis of free imagery.] **L. T. Troland.** 'The Heterochromatic Differential Threshold for Brightness: I. Experimental.' [Determinations of the relative heterochromatic limen of brightness for two observers, with 4 standard and 13 variable colours, at an intensity of 25 photons, with the necessary supplementary observations. In general, the limen tends to increase in passing from the standard to the neighbourhood of its complementary, beyond which it begins to decrease.] **P. Reeves.** 'Rate of Pupillary Dilation and Contraction.' [Shows the effect on pupillary diameter of the closure of one eye; pupillary diameters at fixed brightnesses; and the rates of opening and closing the pupil. Under the conditions of experiment, the time for opening averages 5 minutes, and that for closing 5 seconds.]

Journal of Philosophy, Psychology and Scientific Methods. xv., 17. **B. H. Bode.** 'Consciousness as Behaviour.' [In reply to Marshall in xv., 10, demurs to a consciousness which is irreducible to a form of behaviour and content with James's illustration of the 'automatic sweetheart'.] **H. B. Smith.** 'Non-Aristotelian Logic.' [Logical postulates may be varied like geometrical and yet the various consequences may all "be applicable to one and the self-same world" which "is plastic enough to illustrate two hypotheses indifferently". As may be shown—by symbols.] **R. F. A. Hoernlé.** American Philosophical Association: Reports of the preliminary Meetings of the Leaders of the Discussion for 1918, on Mechanism and Vitalism.—xv., 18. **H. B. Alexander.** 'Metaphysics as a Fine Art.' [It yields the pleasure of being an 'initiate,' but is not to be caged in 'schools' and '-isms' which "pervert a noble art into a mimic science". Being essentially personal, it "never will be complete while men live and discover that they live".] **M. T. McClure.** 'Pragmatism and Democracy.' ["Absolutism is the philosophy of autocracy," derived from mathematics, and affiliated to the belief in the reality of universals.

"The sovereignty of the universal and the passive submission of the particular were the pattern for feudalism," and even in science "the Reign of Law became as inexorable as the fixity of a universal or as the supremacy of the Pope". Pragmatism takes its cue from biology, and its leading ideas are "flexibility, adaptation, and compromise," with "the creative power of intelligence," which differentiates adjustment from mechanism and saves personality.] **W. R. Wells.** 'On Religious Values: A Rejoinder.' [To E. S. Brightman and J. S. Moore in xv., 3. Interesting as a 'behaviourist' treatment of value, and for its explicit assertion about beliefs that "nothing can be inferred from their survival-value as to their truth".]—xv., 19. **F. C. S. Schiller.** 'Truth and Survival-Value.' [Apropos of W. R. Wells's assumption in xiv., 24, that to argue from the value to the truth of a belief is utterly false, and indeed 'the Pragmatic Fallacy,' it is urged that pragmatism has merely drawn attention to a common human practice which deserves careful examination. Admittedly at first sight there is no connexion visible between value and truth: it begins to appear only when it is recognised that every truth has to come into being, to seem desirable, and more valuable than any alternative. Hence truth seems to be simply the term for the sort of value which is cognitive or logical. Next a question arises as to the validity of a value claimed, and it is seen that in disputes about values the logician must avoid the fallacies of 'confounding the persons' and of '*ex post facto* wisdom'. If these are avoided, no genuine cases of beliefs valuable, but not true, appear to remain. However, it has next to be noticed that if truths are a species of value they must be interchangeable with other species, and their rate of exchange and value of equivalents may be inquired into. And it becomes conceivable that a doctrine may be so lacking in other sorts of value that its claim to truth-value is never admitted. Three such cases of "beliefs whose truth-claim is rejected for non-cognitive reasons" are considered, (1) the belief that life is a dream, (2) solipsism, and (3) pessimism. Hence it seems untrue that "survival-values cannot determine truth-value". "It is even possible that ultimately and indirectly *all* truth-values are affected by the survival-value test."] **D. F. Swenson.** 'Sixteen Logical Aphorisms.' [Too long as aphorisms, too short as discussions.] **E. L. Schaub.** Eighteenth Annual Meeting of the Western Philosophical Association.—Vol. xv., No. 20. **G. A. de Laguna.** 'The Empirical Correlation of Mental and Bodily Phenomena.' [Is to be understood only by recognising that "the central nervous system is not primarily a physiological organ. Its function is only secondarily to maintain the inner equilibrium of bodily processes . . . its primary function is the adjustment of the behaviour of the individual as a whole to the outer world of goods and dangers which constitutes his environment. It is in the performance of this wider function that we must find the correlate of feeling and thought rather than in the stimulation of neurone and ganglion."] **R. C. Lodge.** 'The Division of Judgments.' [A formal classification of propositions "according as the perceptual or the intellectual element predominates."] Bibliography for Discussion on Mechanism *versus* Vitalism held at the American Philosophical Association.—Vol. xv., No. 21. [Lost in transmission.] **A. A. Goldenweiser.** 'History, Psychology, and Culture: A Set of Categories for an Introduction to Social Science. Part I.' **H. Goddard.** 'Politics, Philosophy and Poetry.' Further Bibliography of the Writings of **C. S. Peirce.**—Vol. xv., No. 22. **A. A. Goldenweiser.** 'History, Psychology, and Culture, Part II.' [Discusses how far historical events must be regarded as determined by 'laws' or are radically recalcitrant to such explanation, and concludes that "the deterministic and the accidental . . . are intimately interrelated, being in fact both complementary

and restrictive." "The driving power, the 'yeast' of history is supplied by various accidental factors in origin, individual . . . or at any rate external to a given system." "Thus the accidental appears as predominant . . . when it comes to the particular *when*, *where*, *how*, and even *what*, of events." However, the accidental also "is restricted by the deterministic factors. Certain things coming from without a system, or even originating from within will not 'take'."] **A. A. Merrill.** 'Free Will and Intuition.' ["You can predict nothing concerning consciousness and that is all that is meant by free will."]—Vol. xv., No. 23. **G. A. de Laguna.** 'Dualism in Animal Psychology.' [Discusses àpropos of the second edition of M. F. Washburns, *The Animal Mind* the comparative merits of 'behaviourist' and 'dualist' interpretations. holding that the latter "step outside the bounds of scientifically verifiable hypothesis and enter upon purely metaphysical speculation in the bad sense of the term." Nevertheless, the 'mechanistic behaviourism' of Bethe and Loeb is not approved of either, and 'introspection' need not be 'scrapped.' It is only empirical observation.] **H. R. Marshall.** 'Other Men's Minds.' ["The attribution of a consciousness characteristic to other men, connected with their behaviour, is not due to any knowledge that transcends experience, but is due to a quite natural interpretation of that part of that experience which relates to the behaviour of others."] **H. P. Weiss.** 'Conscious Behaviour.' [A defence of 'behaviourism' which regards 'phenomena' as singular, and explains that "some psychologists prefer to substitute natural science concepts in which the principles of evolution, phylogeny, and ontogeny are explicitly regarded as underlying their investigations."]—Vol. xv., No. 24. **T. R. Powell.** 'The Logic and Rhetoric of Constitutional Law.' [An interesting study of the ways in which judicial decisions render it flexible.] **H. Goddard.** 'The Coming Bravery—A Spencerian Dream.' [On the passing of individualism.]—Vol. xv., No. 25. **M. R. Cohen.** 'The Subject Matter of Formal Logic.' [The "science designed to train young people in the habits of clear thinking," "is neither clearly distinguished from psychology nor frankly treated as a branch" thereof. "In addition it has interjected into it the following miscellany . . . (1) Linguistic information as to the meaning and use of words . . . ; (2) rhetorical considerations as to the persuasive force of various arguments ; (3) metaphysical considerations as to the reality or unreality of universals and particulars and their relations ; (4) epistemologic, *i.e.*, mixed psychological and metaphysical, considerations as to the nature of knowledge and its relation to what is called the world of reality ; (5) catalogues of miscellaneous ancient errors, under the head of material fallacies ; (6) pedagogic directions as to the conduct of the human understanding, teaching us how to discover the cause of typhoid or of some other disease of which the cause is already known ; (7) miscellaneous general considerations of various other sciences and their histories, which pretend to describe the essence of scientific methods ; and (8) the rudiments of formal or symbolic logic." A paper well worth reading which finally plumps for the identification of logic and mathematics.] **J. B. Pratt.** 'Professor Spaulding's Non-Existent Illusions.' [Reviews his *New Rationalism* and criticises its accounts of error and illusion. *viz.* (1) that "illusions have a perfectly good causal explanation ; (2) that they consist in taking one entity to be another which it is not, or in localising it in the wrong place or the wrong time ; (3) that they are not existents, but were subsistents." The first is shown to be irrelevant, the second to involve the reality of error as a subjective fact, which is incompatible with 'pan-Objectivism,' and the third to be untenable.]—Vol. xv., No. 26. **B. H. Bode.** 'Mr. Russell and Philosophical Method.' [Reviews *Mysticism and Logic*, and concludes that

"in the end the attempt to reduce all knowledge to the type of acquaintance breaks down and leaves the world of Ideas and the world of temporal existence in much the same mutual isolation as in the philosophy of Plato," while a philosophic 'emancipation' that "bids us turn our backs on the affairs of this world and seek the fulfilment of our aspirations in the contemplation of an *n*-dimensional world, created from false premises and by a dubious logic" is "not a deliverance but an opiate".]—Vol. xvi., No. 1. **B. Russell.** 'Professor Dewey's *Essays on Experimental Logic*.' [Declares that "in reading this collection of essays I have been conscious of a much greater measure of agreement than the author would consider justifiable on my part," and that often in Dewey's criticisms of himself the only thing he disagreed with was that the criticism applied to him. Proceeds to explain 'Logical and Psychological Data,' distinguishing "three problems—one of pure psychology, one of mixed psychology and logic, and one of pure logic". Then discusses Dewey's instrumentalism which is complimented as "a pragmatism which is not intended to be used for the support of ancient superstitions," and will not "dogmatically deny its truth," but criticises its omission to deal with Hume and scepticism. Incidentally analyses his own bias, and explains why he likes behaviourism and neutral monism, and is repelled by a pragmatism which is "connected with theological superstition and with the habit of accepting beliefs because they are pleasant," censures "the instinct of contemplation and of escape from one's own personality," which is a valuable ideal functioning as a sort of religion, and allows us only to know a world which is "man-made like the scenery on the Underground". Finally, Russell discusses 'the Problem of the External World,' and concludes that "whatever accusations pragmatists may bring, I shall continue to protest it was not I who made the world". Altogether an important and brilliant article.]—xvi., 2. **A. G. A. Balz.** 'The Use and Misuse of History.' [A criticism of the current ways of writing the history of philosophy which points out that "histories of philosophy that shall organically relate systems to their generating conditions, and connect concepts with the massive and fecund life of groups, have not been written," that "a philosophy may be comparatively foreign to the contemporary social environment," and that "a society may outgrow a problem before philosophy has had time to find a solution".] **M. F. Washburn.** 'Animal Psychology.' [A reply to G. de Laguna in xv., 23.] **F. C. S. Schiller.** 'Doctrinal Functions.' [Comment on C. J. Keyser in xv., 10, which suggests that 'doctrinal functions' as defined may be traced everywhere, in religions, philosophies, and political creeds. Also that for many persons their beliefs are habitually 'doctrinal functions,' seeing that the "meaning and value they attach to them vary with their circumstances, moods, temper, and state of health". Also that, as Keyser admits that 'a propositional function is neither true nor false,' and it is always possible to select such constants as will generate, not a true proposition, but a nonsensical, the whole of *pure* mathematics must be composed of 'doctrinal functions,' and there cannot, strictly, be any mathematical *truth*. Every mathematical formula may be applied to cases where its values are either false or nonsensical. In general it follows that no rules are strictly universal and absolutely true; for all "get their real meaning from their application to cases".] **H. R. Marshall.** 'Of Outer-World Objects.' [Suggests that sight equips the new-born babe's experiences of 'otherness' with the quality of 'out-thereness,' essential to the construction of an 'outer-world'.]—xvi., 3. **J. Guttmann.** 'Imagination as a Factor toward Truth.' [Raises after some pragmatist gloating over the downfall of Hegelism the question, "If we grant that the Absolute does not exist, what may we conclude of the

power of an absolutistic philosophy on man?" *I.e.*, granting that absolutes belong to "the Kingdom of the imagination," are they beneficial to man? The answer is that we may select the good ones and make 'reality' a term of ethical import.] **Q. L. Shepherd.** 'Pragmatism and the Irrelevant.' [A pragmatist repudiation of Miss Ackerman's attempt in xv., 13, to identify pragmatism with Hegelism. "Hegelism would have us go beyond knowledge to explain knowledge." But its "manner of going beyond" leaves all the difficulties where they were.] **C. A. Ellwood.** 'Comment on Dr. Goldenweiser's History, Psychology, and Culture.' [*Cf.* xv., 21, 22. Praises the articles as "a contribution of prime importance to the methodology of the social sciences".]—xvi., 4. **J. Guttmann.** 'Political Thought in Reconstruction.' [Demands a plan for reconstruction which can excite enthusiasm and intelligent foresight.] **V. R. Savic, W. T. Bush, H. Goddard, J. H. Tufts, H. B. Alexander, H. A. Overstreet.** 'An Opportunity.' [An appeal to America to help in the formation of the 'national philosophy' the Jugo Slavs 'need,' and American responses. The proposal at first sounds like satire, both on the extravagance of 'nationalism' in philosophy and on the parties concerned, but probably means that the Jugo Slavs are afraid of falling under the intellectual domination either of the Germans or of the Italians.] **A. P. Brogan.** 'The Fundamental Value Universal.' [Argues that "the relation 'better' is a sufficient fundamental universal for the theory of value . . . all value facts are facts about betterness," that "goodness and badness are not simple qualities," that ethical and æsthetical values involve betterness, and finally claims to have "gone over all of the general value terms carefully". But nothing is said either about logical or about pleasure values.]—xvi., 5. **A. Schinz.** 'New and Dominating Tendencies in French Philosophy since the Beginning of the War.' [Classified under heads of 'Papalism' and 'Economic Democratism'; but the stuff brought to the surface by the War in France does not appear to differ much from that produced elsewhere.] **I. Edman.** Eighteenth Annual Meeting of the American Philosophical Association.

Revue de Métaphysique et de Morale. Mai-Juin, 1918. **M. de Wulf.** 'Civilisation et philosophie aux XII^e^ et XIII^e^ siècles.' [The middle ages to be judged by an absolute standard; mere comparison with our own times is futile. By the end of the XIIth century a satisfactory synthesis had been made of the remains of classical tradition, the Christian religion, and the special peculiarities of the races who overthrew the Roman empire. Throughout the XIIIth century this synthesis was at its best and produced philosophical systems of permanent value. But, though outwardly stable, authoritative, and international, it contained the germs of modern differences of nation, philosophy, and social organisation.] **E. Guillaume.** 'La théorie de la relativité et le temps universel.' [An attempt to introduce into the equations of the theory of relativity a new variable which shall be neutral as between systems in relative motion and play the part of Newtonian time in the classical theory of mechanics.] **V. Delbos.** 'L'art et la philosophie.' [Philosophical attitudes towards the world can be expressed in poetry, as shown by Lucretius, Sully-Prudhomme, and Goethe; and in music, as shown by Wagner. Such efforts, fail, however, when they merely turn argument into verse. Great metaphysical systems in their architectonic character resemble great works of art.] **G. Marcel.** 'La métaphysique de Josiah Royce.' [A short sketch of R.'s life and works, followed by a long and very clear account of his philosophy. (To be continued.)] **R.H.** 'Réflexions sur la force du droit.' [Merely to set force and right in an abstract opposition is silly. The German partisans of force hold that their country's

power is due to its superior virtues and organisation, and that it has a duty to impose these on less advanced peoples. These views are rendered popular by the past history of the empire, are in accord with the predominant philosophy, and are bolstered up by various empirical arguments. Nevertheless they are mistaken and inconsistent; mere organisation and material productivity give no such exalted rights, and, if they did, the further argument from racial and linguistic affinities would have been needless. The believer in right will respect the personalities of nations, whether weak or strong. He will not necessarily guarantee them in their *de facto* possessions, unless they are using them for the general good of humanity.] Juillet-Août, 1918. **O. Hamelin.** 'Le Concept chez Aristote.' [The concept *par excellence* is a simple intellectual intuition of an intrinsically simple object. But this is an ideal, and A. generally means by it the definition of anything that has some kind of unity. In such concepts the genus plays the part of matter, and the difference that of form. Their whole content is universal, and they do not reach particular individuals.] **R. Mourgue.** 'Néo-vitalisme et sciences physiques.' [Mentions a number of facts which make against a cheap and easy mechanism in biology, but admits that they are not conclusive. Nevertheless it is wise to admit the possibility of processes in the organic world inexplicable by reference to inorganic processes. In this sense (and in this alone) is vitalism scientifically respectable.] **A. Leclère.** 'L'optimisme et la science.' [Science can guarantee no inevitable moral progress. The latest achievements of the human race are always the least stable, and we, none of us, act even up to the best thought of our time. Even if deliberate volition involve a fresh factor, yet it depends, to an indefinite extent, on lower conditions; it develops slowly in the individual, and does not last long in its full perfection. To correct all moral defects men's bodies would need to be remade, and medicine is never likely to reach this point. Nor would even this be enough, since external conditions would also have to be indefinitely far modified.] **G. Marcel.** 'La métaphysique de Josiah Royce' (*suite*). [R.'s attempt to solve the One and the Many by 'self-representative systems' is bold and honest, but finally untenable. He refuses to palter with the problem of evil and makes God himself suffer our pains and temptations and transform them into the experience of temptations overcome. But, although this conception as developed by him is subtle and profound enough to meet all superficial objections, it must be doubted whether he has really reconciled the freedom that is wanted for moral purposes with the unity which his metaphysics demands. R.'s theory that God's consciousness contains, in a single specious present, what for us involves past and future, is more compatible with the Bradleyan view that finite experience is transmuted in the Absolute than with his own view. (*To be continued.*)] **E. Cramaussel.** 'Pour un enseignment philosophique nouveau' (*suite*). **C. D. Broad.** 'Sur la dégradation de l'energie.' [An attempt to refute M. Rougier's version of M. Selme's argument against Clausius's Theorem. M. Rougier has tried a *reductio ad absurdum*, but the absurdity is in his premises and not in Clausius's conclusions.]

Archives de Psychologie. Tome, xvi., no. 2. **A. Ferrière.** 'La psychologie bibliologique d'après les documents et les travaux de Nicolas Roubakine.' [Outlines the life of Roubakine and his labours in behalf of popular scientific education, with illustrations of his methods. The proposed 'psychology of the book' is concerned with its contents, regarded as intellectual, affective and volitional; with its production, marketing and consumption (psychology of the author; of the printed work in re-

lation to author, distributor, public; of the reader); and with the individual and social conditions of production and consumption.] **C. Baudouin.** 'Symbolisme de quelques rêves survenus pendant la tuberculose pulmonaire.' [Dreams due to repression of fears regarding health; the will to live, not the sexual instinct, is in play.] **C. Baudouin.** 'Psychanalyse de quelques troubles nerveux.' [Ideas of persecution and neuralgias due to a sexual complex and the repression of a desire for culture; sexual shock sublimated in artistic productivity.] **C. G. Jung.** 'La structure de l'inconscient.' [Psycho-analysis first reaches the personal unconscious, the layer of repression, and then penetrates to the impersonal unconscious, the collective psyche. The result is a dissolution of personality; the patient feels himself to be like a god; free rein is given to imagination. This stage can be overcome neither by regressive reconstitution of the *persona* nor by identification of individuality with the collective psyche; the patient must remain in touch with his unconscious, and treatment must proceed by way of interpretation of his imaginative ideas.] Recueil de Faits: Documents et Discussions. **R. Weber.** 'L'orientation dans le temps pendant le sommeil.' [The tendency to wake at a given hour depends on an automatism; guesses at the time of casual waking have an average error of 45 min.] Bibliographie. Nécrologie, 1919.

"SCIENTIA" (RIVISTA DI SCIENZA). Series ii., Vol. xxiv., September 1918. **Annibale Ricco.** 'La costituzione del Sole.' **Sir Joseph Larmor.** 'On Carnot's Theory of Heat.' **D. Fraser Harris.** 'Inertie fonctionnelle et momentum.' **T. N. Carver.** 'L'agencement financier d'une grande guerre.' **E. Benes.** 'La lutte des Tchécoslovaques pour leur État national.' Book Reviews. General Review. **Lavoro Amaduzzi.** 'Le principe de relativité. Ière Partie: L'immobilité de l'éther et l'hypothèse conciliatrice de Lorentz.' [*A propos* of recent books by Silberstein, Cunningham, and Lémeray.] Review of Reviews. Chronicle. French translations of articles in Italian and English.—Vol. xxiv., October, 1918. **H. G. Zeuthen.** 'Sur les définitions d'Euclide.' [Psychology confirms the view that the logical exposition of geometry given by Euclid does not represent the (intuitional) way in which geometrical truths were acquired. The sketch of the probable way in which this science grew up, and of the way in which its principles were given a new form, is wholly excellent. The reform may serve as a type of all other reforms in scientific principles.] **J. H. Jeans.** 'The Present Position of the Nebular Hypothesis.' ['Put forward in 1755 by Kant, and again independently in 1796 by Laplace, it is still in 1918, in the opinion of most astronomers, a speculation which has been neither proved nor disproved. Such a length of life, although it would be small for the speculations of metaphysics, is almost unparalleled in natural science. The fundamental reason for the great length of life will perhaps be found in the extreme difficulty of obtaining either observational or theoretical tests of the truth of the hypothesis. . . . It must be admitted that Laplace's ideas, when developed mathematically to their logical conclusions, show a striking capacity for interpreting many if not most of the formations observed in the sky. Perhaps it is vague clues rather than full explanations that have been yielded so far; the time for full explanations has not yet come, but the outlook is full of hope. The only formation which Laplace's hypothesis now seems definitely unable to explain is, paradoxically enough, just that particular one which it was especially created to explain, namely the solar system. Laplace's intuition and his mathematical ideas were wonderfully accurate, but he was led into a faulty application of them. A final verdict cannot yet be pronounced—any

attempt to do so would be dogmatism—but it may be that before long the reasoned and considered verdict of astronomers will be that the hypothesis is at the same time a failure and a splendid success—a failure as regards the immediate purpose for which it was designed; splendid in having achieved a success greater than any that its author could possibly have dreamed of.'] **F. G. Donnan.** 'La science physico-chimique décrit-elle d'une façon adéquate les phénomenès biologiques?' ['The statistical laws of present physico-chemical science render great services in the description of changes and series of events which relate to the biological units in so far as these units can be regarded as huge molecular assemblages, but, as these units are organised individuals, we must await the development of a new physico-chemical science to help the biologist to attain his higher and final ends. The physicist or the chemist of to-day can be compared to the actuary of a great life-assurance company who knows how to calculate very precisely and with great certitude the means of life and death in a very large normal community. The physico-chemical science of the future may be compared to a great doctor who can predict the chances of life and death in the case of a particular individual at a given moment.'] **A. Graziani.** 'La politica economica e sociale per il dopo guerra.' **C. Stoyanovitch.** 'La coincidence des intérêts politiques et économiques de la nation Yougoslave et de l'Italie.' Book Reviews. General Review. **Lavoro Amaduzzi.** 'Le principe de relativité. IIème Partie: La formule de Lorentz de transformation des coordonnées et les generalisations subséquentes d'Einstein.' [This, together with the article on the same subject in the number for the previous month, forms a short and excellent account of the principle of relativity.] Review of Reviews. [A feature is formed by reviews of some recent papers on political, social, and economic problems of the war and after the war.] Chronicle. French translations of articles in English, and Italian. An admirable number.—Vol. xxiv., November, 1918. **A. C. D. Crommelin.** 'The Dwarf Stars.' **Carlo Somigliana.** 'La meccanica delle oscillazioni sismiche.' **J. Joteyko.** 'Le rôle biologique de la fatigue.' **F. Carli.** 'La guerre et la différenciation de l'Europe.' **A. Meillet.** 'Les langues dans le bassin de la Mer Baltique.' Book Reviews. Review of Reviews. Chronicle. French translations of articles in English and Italian.—Series ii. Vol. xxiv. December, 1918. **G. Armellini.** 'Il sistema planetario e le sue leggi empiriche.' **Jean Nageotte.** 'La matière organisée et la vie.' **W. M. Flinders Petrie.** 'The Origin of the Alphabet.' **F. J. C. Hearnshaw.** 'The Questions of the East as they have been transformed by the Russian Revolution.' **C. A. Reuterskiöld.** 'Les bases d'un nouveau droit des gens.' Critical Note. **J. A. Thomson.** 'Le rôle et l'importance de la synthèse scientifique.' [On Rignano's *Essays in Scientific Synthesis* (London and Chicago, 1918).] Review of Reviews. French Translations of Articles in Italian and English. Series ii. Vol. xxv. January, 1919. **G. R. Kaye.** 'Influence grecque dans le développement des mathématiques hindoues.' [Some centuries after Alexander's conquest of India (326 B.C.) was a much more important invasion, spiritual rather than political, which was the beginning of the 'golden age' of India. At this time much of the best that India has done in science, art, and literature was produced. In medicine, sculpture, the drama, astronomy, and astrology, points of contact with Greek civilisation and teaching have been established. In mathematics, in spite of the conclusions of many orientalists who were not mathematicians, recent work has shown that the Hindus owe much if not all to the Greeks. In particular the usual account of a Hindu origin of our numerical notation is based on invalid reasons, as is shown by the work of the author from 1907 onwards and of Carra de Vaux in *Scientia* of 1917. It is not impossible that this argument

should be crowned by some event like the discovery of the lost books of Diophantus or the works of Hypatia.] **Sir Oliver Lodge.** 'Ether and Matter.' [A worthless, would-be popular account which the author tries to deck out with a dull and vague rhetoric. For example: 'Now the probability is that every sensible object has both a material and an etherial counterpart. One side only are we sensibly aware of—the other we have to infer. But the difficulty of perceiving this other side—the necessity of indirect inference—depends essentially and entirely on the nature of our sense organs, which tell us of Matter and do not tell us of Ether. Yet one is as real and substantial as the other, and their fundamental joint quality is co-existence and interaction. Not interaction everywhere and always, for there are plenty of regions without matter—though there is no region without Ether—but the potentiality of interaction, and often the conspicuous reality of it, everywhere prevails and constitutes the whole of our purely mundane experience.'] **Giuseppe Levi.** 'La vita degli elementi isolati dall'organismo.' **L. Leger.** 'Le panslavisme.' **P. Otlet.** 'La société intellectuelle des nations.' Critical Note. **P. Bellezza.** 'Phonologie romane.' Book Reviews. [We may mention reviews of B. Russell's *Mysticism and Logic* (London and New York, 1916) and some other books by C. J. Keyser and E. V. Huntington on questions connected with the logic and philosophy of mathematics.] Review of Reviews. French translations of articles in English and Italian. —Series ii. Vol. xxv. February, 1919. **José M. Plans.** 'Sur l'introduction de la méthode des perturbations dans la Mécanique générale.' [The modern methods of celestial mechanics have been applied to certain problems of general mechanics by Kobb, Moulton (1911), and Behrens (1911). This paper indicates how much the same thing can be done with the classical method of perturbations, the original purpose of which was to solve by approximations the problem of three bodies. Unfortunately the number of questions to which this method can be applied is very limited. But this indication seems to the reviewer of importance from a philosophical point of view, and it is also very characteristic of the ideals of *Scientia*: indeed, we are shown that, if some scientific problem has been solved by a special method, it is sometimes useful to apply it—generalising it suitably—to other questions more or less similar.] **Alexandre Moret.** 'L'écriture hiéroglyphique en Egypte.' [A long and detailed account of the researches of Champollion and others, and description of the present state of knowledge of the subject. To a logician, it is particularly interesting that Egyptian writing was primarily *ideographic*, exactly as Chinese writing is—or, it may be remarked, just as are chemical, musical, mathematical, or logical symbols. In the course of evolution, this ideography approximated to *phonetic* notation—which is in principle that of modern languages; but 'though, in the course of centuries, it developed more and more precise means of expression, it never quite renounced its ancient elements'.] **A. C. Pigou.** 'The War and Social Reform.' **F. Virgilii.** 'L'emigrazione tedesca prima della guerra e le conseguenze per la Germania dell' intervento dell' America nel conflitto mondiale.' Critical Note. **Edouard Claparede.** 'Les nouvelles conceptions éducatives et leur verification par l'expérience.' Book Reviews. Review of Reviews. French translations of articles in English and Italian.

IX.—NOTE.

A PROOF THAT ANY AGGREGATE CAN BE WELL-ORDERED.

THE account of my process for well-ordering any given aggregate M described in MIND for July, 1918 (N.S., vol. xxvii., pp. 386-388), has been criticised by some on grounds which show, I think, that the point of the process has not been grasped. The starting-point of my process was the classes (κ) such that κ_ξ consists of all those chains of M which are of type ξ, and of those chains only. No assumption was made as to whether any suffix ξ is transfinite or not, or whether or no, for each given M, there is an upper transfinite limit to these suffixes. The process does not, of course, consist in choosing a chain arbitrarily out of each of these κ's; but a rule was given for ranging each member of each κ in succession with one and only one "class of direct continuations". Naturally some of these classes of direct continuations are repetitions of certain other such classes, but the process of determinate repetition of a class is not a process that involves any arbitrary selection. It is very important to consider the rule (which is defined by induction) as a *whole*; so that the classes of direct continuations constructed at a certain stage of the rule are not "constructed by the (complete) rule": the rule successively adds, in a definite way, new chains to given classes of direct continuations as long as there are any chains to add.

Where γ is an ordinal without an immediate predecessor, a class of direct continuations which contains chains respectively of all types less than γ obviously allows us to determine, in a non-arbitrary and unique manner, a chain of type γ. For example, a class of direct continuations in which the members are respectively of all types less than ω, and which may consequently be represented by

$$(a_1\,;\ a_1,\ a_2\ \ldots\ ;\ a_1,\ a_2,\ a_3\ \ldots\ ;\ a_n\ \ldots\ ;\ \ldots),$$

determines uniquely the chain $a_1,\ a_2,\ \ldots\ a_n,\ \ldots$ of type ω which is such that the above class of direct continuations consists of all segments of this chain of type ω and of no other members. Thus it appears that, if we can determine a rule by which is constructed without any arbitrary selections a class of direct continuations containing chains of respectively all the types less than γ, we can construct a chain of M which is of type γ.

The rule for ranging anew all the members of all the κ's in classes of direct continuations was given in my Note referred to, and here it is only necessary to remove some misunderstandings on the part of critics. In the first place, by a definite rule we construct actually—though theoretically—classes of direct continuations such that each of them defines a chain which exhausts M. It is obviously insufficient merely to define "the class of all chains that exhaust M," since this class might conceivably be null: we could not, then, infer from the definition that the class contains members any more than we could infer, from the fact that all trespassers will be prosecuted, that there is at least one trespasser who will be prosecuted. The process of construction, which is effected by an induction which is, in general, transfinite and in which there is nothing

arbitrary at any stage, leaves no doubt as to the existence of several classes of direct continuations of which each one can be proved to define uniquely a chain which exhausts M.

In the second place, the question of the construction of a chain of type γ, where γ has no immediate predecessor, when we are given that chains respectively of all types less than γ are ranged in classes of direct continuations has strangely enough produced difficulties with some who do not seem to have realised the nature of a class of direct continuations and its relation, indicated above, with the chain that defines and is defined by it.

In the case where γ has an immediate predecessor, $\gamma - 1$, the construction as described in my previous Note has presented no difficulty. It should be remarked that the construction was defined by induction: it was given for $\gamma = 1$ and also in general. Indeed, for $\gamma = 2, 3, \ldots$ successively, if all the κ's of suffixes less than γ are rearranged in classes of direct continuations in the definite way given by this rule, then, provided that γ has an immediate predecessor, if κ_γ has members, all these members can be added on to the classes of direct continuations already formed in such a way that the process of manufacturing repetitions ("doubles") in definite number of certain of the above classes of direct continuations allows us to put each member of κ_γ with one and only one of these classes of direct continuations and their repetitions. There is nothing arbitrary in any stage of this process, and so Zermelo's principle of selection is not required. If M is finite, it is evident that, if there is a κ_γ, there is not necessarily a $\kappa_{\gamma+1}$; but, if M is not finite, if there is a κ_γ, it follows that there is a $\kappa_{\gamma+1}$. It may further be remarked that the process which I gave, in *Nature*, vol. ciii., 1919, p. 45, for constructing a chain of type ω out of an aggregate M for which we know that there are κ's respectively of all suffixes less than ω is in principle the same as the present method: the apparently simpler case being there worked out for the benefit of those critics who mistakenly supposed that this case could be treated more simply than the general case.

There only remains the case of γ having no immediate predecessor. But in this case it is at once evident, by what has been said above, that if all the κ's respectively of all suffixes less than γ are rearranged in classes of direct continuations, each of these classes defines a chain of type γ. Consequently the members of κ_γ can be constructed in terms of members of the κ's of suffixes less than γ.

If, then, we do not come across any member of a κ that exhausts M, we can proceed from suffixes less than γ to γ, whether or not γ has an immediate predecessor. If, then, it were possible that the series of κ's should have no upper transfinite limit to their suffixes, the complete rule given would construct several classes of direct continuations such that each of them determines a chain of the type (β) of all ordinal numbers. My argument of 1904 shows that this is impossible, and that therefore there is an ordinal number ζ such that, though there are κ's of all suffixes less than ζ, there is no κ_ζ.

But, in this case, if no member of one of these κ's of suffixes less than ζ were to exhaust M, it would follow, by the application of the reasoning given above to the fact that ζ has not an immediate predecessor, that there are chains of M which are of type ζ, and that thus there is a κ_ζ which is not null. Hence, if there is an ordinal number ζ such that there is no chain of M which is of type ζ, it is necessary that there should be a chain of type less than ζ which exhausts M. Thus the fundamental point is established.

The two chief critics with whom I have discussed my method are the two best known "mathematical logicians," whom I will call "W" and

"R". W informed me that he was "bored with well-ordered series," by which I suppose he had not recognised the rather obvious fact that the problem of well-ordering was fundamental to the universal validity of the development of a remark of Schoenflies that constitutes W's most important discovery in the arithmetic of transfinite cardinal numbers. After a number of irrelevant criticisms, which showed conclusively that W had not understood the point of my method, he excused himself, on the grounds of having other mathematical things to do, from further considering the solution of a problem which is fundamental to most of the work of himself and others in the theory of aggregates, and is the most important problem in the principles of mathematics. I now come to R. For fifteen years, it has been generally recognised that the difficulty of the multiplicative axiom cannot be surmounted by a direct method: the method I gave may be called indirect. The chief criticism of R on my method was that there are difficulties in the other method. Such a criticism might almost cause one to suspect that "mathematical logic" is a very different thing from logic.

The first of two minor criticisms (advanced by men, "H" and "B," who are not "mathematical logicians" to quite such a high degree) is that a chain of type γ, where γ has no immediate predecessor, cannot be constructed without a *petitio* from a class of direct continuations in which the members are respectively of all types less than γ. This criticism is based on non-realisation of what a class of direct continuations is, and I hope I have explained things in what precedes. The other criticism was that the rule constructs classes of direct continuations in which there is no chain of type greater than 2, say, and that this class cannot determine a chain that exhausts M. The reply is that the *complete* rule constructs no such class: such classes are constructed at a certain stage of the rule, but subsequent stages add new members to these classes.

PHILIP E. B. JOURDAIN.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—INTROSPECTION.

By J. Laird.

It is written in most text-books on psychology that there are two main sources of psychological evidence, introspective and interpretative. The psychologist may either examine his own mind by directing his attention to its working, or he may endeavour to translate the behaviour of other men and of the animals into terms whose meaning is obtained through introspection. Plainly, if these statements are true, the validity of psychological conclusions must depend on the validity of introspection, and, if they are false, most psychologists have misunderstood their business. Psychologists, therefore, must be prepared to stand on their defence in this fundamental matter whenever the value of introspective evidence is seriously challenged. At the present time, this challenge is sounded from many different quarters, although it is much less formidable in some cases than in others.

Indeed, some of the objections to introspection seem to depend upon the taste and aspirations of the objector rather than upon the logical arguments he can muster. Students of comparative psychology, for instance, naturally dislike introspective methods and interpretations into introspective terms. They can tell how an animal responds, not how it feels. They can measure the flow of a dog's saliva at the sound of a dinner-gong or the time in which a blind rat learns to thread its way through a maze, and this is the only type of event they can measure with precision. Even if the animal seems to be as intelligent as the Elberfeld horses were supposed to be, the state of the animal's mind must remain a matter of conjecture. Comparative psychologists, therefore, prefer to keep

to methods which give objectively certain results, and to study human behaviour in the same way as animal response, in order that their measurements and other statistics may be strictly comparable.

A preference of this kind, however, does not affect the principle of the usual psychological methods. At the best it gives a hint that the study of mere behaviour is more likely to be useful and informing than the study of psychology. This hint is frequently supplemented by a variety of dubious arguments. In the first place, we are told that introspective presuppositions and ideals have hitherto impeded honest inquiry into behaviour, that the exact study of animal behaviour opens a promising field which has been very inadequately explored, and that young investigators are more likely to discover important new truths here than if they follow the beaten track of traditional psychology. This cheerful outlook becomes still brighter when we remember that laboratory appliances and technique have recently advanced very notably in this sphere. In the second place, psychologists are asked to reflect upon the contrast between the new methods for studying behaviour and the old introspective psychology. With the new methods science enters, clad in a livery which all the world has come to know and respect. The exact technique of the laboratory receives due recognition, verifiable statistics are carefully compiled, objective proof is forthcoming. The old methods, on the other hand, are survivals from the time when mere reflexion was supposed to be superior to experiment, and neither Tycho Brahe nor Galileo nor Huyghens had come to teach the world a more excellent way. In a word, the old methods and the new are separated by the great gulf which divides pure science from mere literature. To clinch the argument, psychologists are sometimes informed that introspective methods do not obtain results that can be utilised by legislators or social reformers under modern conditions.

These arguments certainly show that the usual psychological methods differ from those employed in the other natural sciences. Indeed the alleged uselessness of current psychology is assumed to follow from the mere fact of this difference; and that is scarcely an argument. Those who employ the method of introspection maintain that from the nature of the case each human being can observe his own mind only, and consequently that the methods of psychology must differ fundamentally from those of the other natural sciences, since in their case there is assumed to be a common object which many observers can investigate independently and can measure by methods which presuppose a common instrument of measure-

ment acting uniformly. The mere assertion of this consequence does not prove either that introspection is impossible or that it is useless.

Certainly, if one and the same thing, this mind or that, could be studied by both methods, those methods which have been so successfully used by the other natural sciences might fairly be presumed to be the best for psychological purposes also. But this identification is precisely the point in dispute. The reactions of the organism may be measured and recorded in this way, but are these reactions the same thing as the mental experiences which are the object of introspection? It is surely preposterous to assume this without argument. Indeed the objector himself assumes the contrary. The objector maintains that each psychologist of the usual type is simply a sort of Mrs. Gummidge, and consequently impervious to argument. That good lady, as the reader will recollect, was accustomed to say that she 'felt it more' than the rest of the Peggotty family when the weather was cold, or when she had any other excuse for being 'contrairy'. The only verifiable fact, however, would be whether Mrs. Gummidge 'showed it more'. If so, the objector has the choice of two alternatives. Either what Mrs. Gummidge shows and what she feels are precisely identical or they are not. If not, then *cadit questio.* There are two different fields of study. If so, then it is hard to see why introspective methods should have worked such mischief in comparative psychology or why it should be impossible to tell how an animal feels. In a word it is impossible to impugn either the accuracy or the importance of introspective psychology on the ground that something other than the mind (*i.e.*, behaviour) ought to be studied in another way.

We may pass, then, to more serious objections of principle. The introspective attitude, of course, is so familiar, that there can be no doubts concerning its existence. No one, for instance, could deny that Shelley's lines to the Ravine of Arve describe an introspective attitude:—

> —Dizzy Ravine! And when I gaze on thee
> I seem as in a trance sublime and strange
> To muse on my own separate phantasy,
> My own, my human mind, which passively
> Now renders and receives fast influencings,
> Holding an unremitting interchange
> With the clear universe of things around.

The only disputable questions in the case concern the interpretation of this attitude, not its existence. If psychology is a science based primarily upon introspection, what sort of

process is introspection? What manner of tidings does it convey? Can these tidings be regarded as trustworthy after a careful scrutiny into the problems in theory of knowledge which are implied?

Introspective evidence usually purports to be a descriptive account of a certain matter of fact, the passions and operations of the mind. If so, and unless reason can be shown to the contrary, it seems both legitimate and necessary to assume that introspection has the same general characteristics as any other mental process by means of which we are able to apprehend the truth of fact. It must be a kind of cognition, and, more precisely, a kind of observation implying direct acquaintance with its object. The thesis of this paper is that introspection ought to be so regarded in spite of the numerous objections to this view which are either expressed or implied in contemporary psychology and philosophy.

On the whole, these objections may be subdivided most conveniently under three heads. In the first place it may be argued that introspection as above interpreted is an impossible feat since there can be no such act of direct acquaintance with the mind. A second objection states that the act of introspection necessarily falsifies since it transforms into an object what is essentially not an object. In the third place there is a series of objections connected with the opinion of certain of the American New Realists that neither the Ego nor consciousness are distinctive existent entities.

I.

The analysis of cognition implies in the last resort that the knowing mind is directly confronted with reality. There must be some direct apprehension, and a difference between the process of apprehension and the apprehended fact. Objects which are known indirectly or by description presuppose direct apprehension as much as any others, since any mediate apprehension requires the unmediated apprehension of the data for, and of the links in, the chain of mediation. The difference between process and object, it is true, may be hard to demonstrate in many cases. Sometimes there is clearly an existential difference, as in the present recollection of a former event or in the repeated apprehension of precisely the same proposition. In other cases it is much more disputable whether the existence of the two can be severed, but there must be a difference if the cognitive relation holds. The cognitive relation is never one of identity.

We have to ask another question, then: We want to know

whether there are good reasons for denying the possibility of this relation in the particular instance of introspection. Can the process of introspection be different from the fact it observes, and can it be directly confronted with that fact?

When introspection is interpreted in this way, the analysis of it is broadly similar to that of observation through the senses.[1] Both species of observation are regarded as processes of direct inspection of existent fact. Indeed, the analysis gives no reason for supposing that the kind of inspection is different. The distinctive peculiarities of introspection, together with its range and limits, might well be due to the character of the object apprehended in introspection, and to the special conditions under which introspection is possible. The most obvious objection, therefore, is based upon the denial of any real analogy between these two species of observation. This objection, however, is frequently stated in an irrelevant form. The parallel treatment of introspection and sensory

[1] Mr. Norman Smith, in his *Commentary to Kant's Critique*, asserts in two places (p. 148 and pp. 292-293) that 'no great thinker except Locke has attempted to interpret inner consciousness on the analogy of the senses'. If this sweeping generalisation were accurate it might, of course, be used as an *argumentum ad verecundiam*, and work towards the undoing of little thinkers not sufficiently presumptuous to be content with the solitary *aegis* of Locke. I cannot help feeling doubtful about it, however. For example, I wonder whether Mr. Smith interpreted Descartes rightly at the time he made this statement. The argument in the Second Meditation appears to me to be strangely opposed to it, and I am strengthened in this opinion by considering, *e.g.*, Arnauld's defence of the Cartesian position against Malebranche's view that we know ourselves by a 'sentiment intérieur' only (*Des vraies et des fausses idées*, chap. xxiii., § 8). Perhaps I may quote Descartes, *Principes*, Part I., § 9: "Par le mot de penser, j'entends tout ce qui se fait en nous de telle sorte que nous l'appercevons immédiatement par nous-mêmes; c'est pourquoi non seulement entendre, vouloir, imaginer, mais aussi sentir, est la même chose ici que penser," and *ibid.*, § 11: "Or, afin de savoir comment la connaissance que nous avons de notre pensée, précède celle que nous avons du corps, et qu'elle est incomparablement plus évidente . . . il est certain que nous en remarquons beaucoup plus en notre pensée, qu'en aucune autre chose que ce puisse être; d'autant qu'il n'y a rien qui nous fasse connaitre quoi que ce soit, qui ne nous fasse encore plus certainement connaitre notre pensée."

Mr. Smith's exposition, of course, refers primarily to Kant, but his argument on p. 293 certainly implies that it is always a confusion to suppose that there is even an analogy between 'inner sense' and 'self-conscious reflexion'. Moreover, it is hard to understand his comments unless he means that 'the doctrine which is mainly responsible for Kant's theory of inner sense, namely, that there can be no awareness of awareness, but only of existences which are objective,' is true and therefore decisive against the analogy. If this be his meaning it is surely permissible to ask why 'self-conscious reflexion' implies that there can be no awareness of awareness, and indeed how such reflexion could occur at all in the absence of self-cognition of this kind.

observation does not imply that there are no differences between them. The important question is whether there is or is not in both cases direct acquaintance with a particular existent, and there is no need to press the parallel in any other sense. Accordingly it is irrelevant to argue that there is no evidence for the existence of a distinctive sense-organ in the case of introspection, or to say with Comte that the observing organ cannot observe itself. A sense-organ does not observe anything since only the mind observes, and there is no need to assume that every specific variety of cognition requires a specific organ. If it did there might very well be a specific introspective area in the cortex. Our mere ignorance whether there is such an area or not would not therefore justify us in denying the possibility of introspection. But it is needless to pursue these questions since they have no important bearing on the issue.

The more important arguments seem to be that introspection cannot be interpreted in the way suggested, since in its case observer and observed are one; that an infinite regress would be implied if, *per impossibile*, an act of the mind could really contemplate itself; and that all mental processes are in fact 'enjoyments' which for that reason cannot be contemplated.

Since cognition and, in particular, direct inspection presuppose a difference between process and object, the first of these objections might readily appear to be insuperable. A little reflexion shows, however, that the sense in which it is correct to say that observer and observed are one in the case of introspection is much too general to supply a basis for a conclusive objection. The process of introspection, in any given instance, is part of the same mind as the processes which it observes. These parts, however, need not be the same, and there is no good reason for supposing that they ever are the same. It is clear that if introspection is a process of cognition it cannot be identical with its object when that object is not a cognitive process but a feeling or a conation. Again, in the case of retrospection, process and object are events occurring at different times. In both these instances it is accurate to say that observer and observed are one if the meaning is that observing and being observed belong to one and the same mind. But the process of introspection and its object are not identical in either.

The difficulties connected with the introspection of a cognitive act which occurs simultaneously with the introspection of it would seem more formidable, but even these do not seem to be decisive. It is impossible for a cognitive act to be

its own object, but why should it be impossible for one cognitive act to be aware of another which occurs simultaneously with it? Many psychologists, it is true, deny the possibility of simultaneous introspection altogether, and maintain that the process is always one of memory. This, if it were true, would evade every difficulty of the type we are considering, but the evasion, besides being theoretically unnecessary, would cost too dear. In the first place, it does not seem to be in harmony with the facts. We certainly appear to ourselves to be capable of observing our mental processes at the time of their occurrence and not merely in memory. If we are mistaken in this opinion, at any rate the interval that has elapsed must be too short to be appreciable, and there is no means of proving empirically that there has been such an interval. Moreover, if this theory were true, introspection would always be a process of remembering what had not been observed, and this seems highly improbable. The fact of retrospection, indeed, tends to suggest a precisely opposite view. How can there be retrospection unless we are at least dimly aware of the character of our mental processes at the time when they occur?

The fear of an infinite regress is even less excusable in the case of introspection than elsewhere. Doubtless, if an introspective act may apprehend another cognitive act, a second introspective act might be capable of observing the first, and so on indefinitely, until the empirical limitations of human minds and the tediousness and uselessness of the procedure put a stop to it. An implication of this sort, however, would be a valid objection only if an infinite regress were logically required. There would be a vicious infinite if the occurrence of the process of introspection logically presupposed the introspection of this introspection, and so *ad infinitum*. Otherwise the infinite process, if it could occur, would be entirely innocuous.

The argument that all mental processes are 'enjoyments' which, on that account, cannot be 'contemplated' seems to be a true description of fact with regard to what it asserts, and a mere dogma with regard to what it denies. Mental processes are 'enjoyments' whose being, if they refer to anything, is to refer to something not themselves. Thus the species of 'enjoyment' which is called cognition refers not to itself but to the object which it apprehends. This, however, does not prove that such a process is never itself apprehensible. It merely proves that if the act is apprehended it must be apprehended by another act.

To put the argument otherwise, this account of 'enjoyments' would be tenable only if all enjoyments were intrinsically incapable of being contemplated. If so, they could not be contemplated even in memory. In fact, however, the contemplation of our past experiences in memory seems to be not only possible but even the rule. All recollections, properly speaking, are personal. We recollect not only this or the other objective event, but our former attitude towards it, our former experience of it. The former event and the former enjoyments appear to be apprehended in precisely the same way; and, if that is true, it follows that our enjoyments are not intrinsically incapable of being contemplated. Moreover, there are certain qualities and relationships which are common to enjoyments and to non-enjoyments. Temporal transience, for instance, is common to both and apprehended in the same way in both. But it is plainly impossible that lapse of time should be a common object in this fashion, if enjoyments can never be contemplated and if non-enjoyments must always be contemplated when they appear at all.

These arguments, then, do not prove the impossibility of introspection regarded as a cognitive process directly acquainted with other mental processes. The objector, accordingly, has to take refuge in a simple denial, and to assert that his introspection is not of this kind. This assertion cannot, of course, be directly refuted, but there are considerations which show that it is probably mistaken.

If introspection cannot be regarded as an act of contemplation, what alternative is there? What is the meaning of introspection if it is not cognition?

The alternative seems to depend upon certain untenable assumptions. The objector assumes that a conscious process, simply because it is conscious, must be just what it feels like. Consequently all that is necessary for the appreciation of it is that it should be allowed to exist in its proper character, and be saved from confusion with other concurrent processes. Thus in attending to the states of our own minds we do not really contemplate them. We merely divert our attention from extraneous objects, and immerse our minds in themselves. This, it is held, is the only way in which we can become our true minds, and such a process of becoming is therefore and necessarily a sufficient revelation of what our minds are in themselves.

There is a certain plausibility in this theory, but any initial presumptions in its favour are speedily dispelled by reflexion. Certainly we are what we are, and possibly our psychical existence is precisely identical with our conscious

existence. But if the mere existence of any conscious process is therefore and necessarily a complete revelation of its character and content, where is the need for introspection at all, and how is there room for any possible mistake or dubiety? Why must the psychologist, with great pains and labour, become immersed in himself in this fashion if haply he may achieve some insight into what he really is? He is bound to be what he is without any effort whatever, and if his psychical existence reveals the whole of its character by the mere fact of existing, it would seem to follow that if the introspective attitude differs from the non-introspective, the difference must consist in the fact that the man has become different. In that case introspection would necessarily defeat its own aims, whereas, on the usual theory, there is merely a risk of failure from this cause. Attention to our own minds *may* alter their current. It is hard to suppose that it must. And if it must, how is it possible to allow for the error?

In any case, if there is danger of error in attending to our minds there is no possibility of truth without attending to them. The gods do not give us this gift without requiring our labour in exchange for it. Accordingly, since we have to attend to our minds in order to know them, the important question is whether there is any essential difference between the attention so directed and the attention to other things. There does not seem to be any essential difference. In both cases the attention is directed towards something, in both cases it fixes its object and dwells upon it, in both cases it is the only means of obtaining a direct inspection which has some claim to be trusted.

We may conclude, then, that there is no intrinsic absurdity in supposing that introspection is a process of direct cognitive acquaintance with our own minds, and that there is strong evidence supporting the view that it is, in fact, a process of this kind. This conclusion, of course, does not imply that introspection is infallible. On the contrary, it is usually supposed to be very difficult and very fallible. Indeed, psychologists often give the impression that no one is really competent to make any precise and detailed assertions on introspective grounds unless he belongs to the select *coterie* of those who have devoted many years to practising the art. Be that as it may, there is at least no justification for the claim of infallibility unless with regard to very general assertions such as the statement that doubting differs from believing or repugnance from delight. And the reason is plain. The relation of acquaintance never presupposes any sort of likeness or identity between the process of knowing and the

thing known. Such considerations are entirely irrelevant, and consequently mistakes are just as likely to arise in the cognition of a cognition or of some other mental process as in the cognition of objects which are not mental at all.

II.

The principal argument under this head is the very common one that the mind *as known* is an object, whereas in fact it is a subject. This contention might be argued on several different assumptions, and one of the possible arguments would seem to be identical with the view already considered, *i.e.*, that an enjoyment cannot be contemplated. A separate discussion of it is required, however, owing to the fact that it is usually defended by arguments which depend wholly upon special assumptions in the theory of knowledge. The conclusion of the contention is always that the subject can never be known as it is, since if it is regarded as an object of knowledge its character is therefore transformed.

Plainly the force and the very meaning of this contention depend upon the way in which the terms subject and object are interpreted. Thus the argument is valid if the distinction between the knowing process and its object is interpreted as a mere difference of aspect within psychical fact. The subject in this case could never become an object without a change of aspect which would be equivalent to a change of character. The felt mass would have to become a significant idea. Again, if knowledge is regarded as essentially representative, its immediate object can be only a symbol of fact, and not fact itself, so that the subject as known would be a mere representative of the real subject. In the third place, the so-called subject-object duality might easily be interpreted in a way which made it theoretically impossible for the subject to be an object of knowledge. If subject and object are regarded as abstractions in themselves whose whole being is merely to be complementary to one another, and if they are complementary precisely on account of their inalienable distinction from one another, then the subject would be meaningless as an object. Even if Ferrier's less radical way of putting the theory were true, and object *plus* subject were the *minimum scibile per se*, it is hard to see how this conclusion could be avoided. Ferrier's theory certainly implies that the subject can never be the total object of cognition under any circumstances. What is more, his argument that it could be known at all (in terms of his general theory), seems to be little besides the irrelevant assertion that in point

of fact it is known.[1] If, as he asserts, everything that I know is known to me *mecum*, then I myself must be known to myself *mecum;* and if this circumstance does not affect my knowledge of myself it should not affect my knowledge of anything else.

If the need for brevity could be accounted a sufficient excuse for dealing with a wide subject in a few words, it would be permissible to dismiss these theories as inadequate or inconclusive. The first of them assumes that the whole problem of cognition can be explained by distinguishing those presentations or presentational elements which have a symbolic character from those which have not. This distinction, however, cannot be the essence of the cognitive relation since all presentations, whether or not they can be used as signs, must be presented to something, and since the fact of being presented is the principal element in the case. Similarly the representative theory is clearly inadequate. Knowledge cannot consist wholly in representation since the knowledge that there is representation implies the knowledge both of the representative and of the thing it represents. The third theory, in its turn, suffers from the same defect. There must, of course, be a subject-object duality in any piece of knowing, but how is it possible to know this elementary truth without knowing both subject and object and their relation? It does not follow, of course, that the subject-term is ever found in isolation, and the kernel of Ferrier's contention seems to be that it is never isolated. This, however, is irrelevant. A thing may be known as it is in itself without being isolable, provided that it is capable of being recognised in its proper character and functions, and distinguished from its inseparable accompaniments or correlatives. Indeed, it is only in this sense that the process of cognition can be apprehended introspectively. An act of cognition is nothing unless it refers to an object, and when we attend to it we must attend to it in this specific reference. Thus if introspection be symbolised by I, the act of cognition introspectively observed by A, and the object of this act by O, the total object of introspection is (A*r*O) where *r* signifies the cognitive relation. But we cannot be aware of (A*r*O) without being aware of its constituents A, *r*, and O, and each of them, in that case, is an object of cognition; *i.e.*, I*r*(A*r*O) implies I*r*A.

If these theories of the subject-object relation in knowledge are rejected, the implied consequence that direct acquaintance

[1] *Institutes of Metaphysic*, Prop. III.

with the subject is impossible falls with them.[1] Apart from such theories the objection vanishes. To be directly ac-

[1] The welcome appearance of Dr. Ward's *Psychological Principles* makes me regret very keenly that I did not pay more explicit attention to the arguments in his earlier works at the time when I wrote this paper. It is too late now to try to make amends for this defect. But I feel I must offer some criticisms (even if I have to bury them in the narrow cell of a footnote), because, to my sorrow, the view I am defending is fundamentally opposed to his.

If I understand him correctly, Dr. Ward maintains that psychology is the science of individual experience (p. 28). This *experience* must ultimately be due to the commerce of two *non-experiences*, subject and object. For psychology, therefore, subject and object in themselves are nothing but assumptions (inexpugnable ones, however), since, on any theory, they must be known merely inferentially or 'intellectually' (p. 381), if they are known at all. Within experience, however (Dr. Ward says), there is a duality of subjective and objective. The subjective side consists of *feeling* [*i.e.*, pleasure-pain] and *attention* [*i.e.*, "being mentally active, active enough at least to '*receive* impressions'" (p. 49)]. The objective side consists of presentations (sensory and motor), and these form *continua* which together constitute the 'psychoplasm' (p. 412).

Personally, I should maintain that if the psychoplasm is necessarily distinct from the objects to which (according to this account) it is partly due, then any intellectual inference from the psychoplasm to such objects would be baseless (either in metaphysics or anywhere else). I am more concerned, however, with what Dr. Ward calls 'the subjective side of experience' and should maintain that this subjective side of experience is literally and precisely the subject itself. I assume this in the text when I speak of introspective observation of the 'subject' or the 'mind'. It is plain, at least, that Dr. Ward's refutation of 'attempts to extrude the Ego' (pp. 34-41) have no bearing whatsoever upon such a view, since his arguments are simply and solely a refutation of presentationism, *i.e.*, of the view that *presentations* are so many tubs capable of standing on their own bottoms.

Be that as it may, I find myself much more hopelessly lost and embrangled in another part of Dr. Ward's teaching. According to him, feeling and attention are not presented at all, and 'we know of them mediately through their effects; we do not *know* them immediately in themselves' (p. 58). [The context shows that *know* means 'observe' or 'have presented'.] Thus the whole of the 'subjective side of experience' is merely a matter of inference from presentations.

It must be remembered that 'attention' in Dr. Ward's sense of the word includes *perceiving*, *inferring*, *desiring*, *striving*, and so forth (p. 60), in so far as these can be distinguished from presentations. In a word, it includes nearly every specific psychical fact capable of being described as an 'operation of the mind'. Now I ask whether it is credible that I apprehend the difference between (let us say) striving, loving, and judging, *merely* by inference from my presentations? I should have a lot to infer, should I not?—the whole of my mind, *tout court*. By what species of reasoning and by what flights of intellect should I be entitled to infer with certainty that so many undeniable differences exist on the subjective side of my experience? According to Dr. Ward's theory all these palpable living differences would be so many hypothetical correlates of presentational differences, and, for my own peculiar, I doubt very much whether his general theory would permit me even to infer with him that there is a

quainted with anything, and to be directly acquainted with that thing 'as an object' express precisely and numerically the same fact. The subject 'as known' or 'as an object' is just the subject itself. If we are acquainted with it then we are acquainted with *it*, and no qualification of this statement is permissible unless the acquaintance is mistaken, or the word 'object,' for purposes of technical convenience, is defined in some restricted sense. Nothing can be transformed in any sense whatever simply owing to the fact that it is known. To suppose the contrary is scepticism.

Lest this statement should appear unduly dogmatic, it is advisable to consider two possible rejoinders. The first rejoinder states that while it is scepticism to maintain that a thing 'as known' is *therefore* different from that thing as it is in itself, still some things 'as known' differ in this way. In Mill's words "there is no appeal from the human faculties generally, but there is an appeal from one human faculty to another".[1] Thus the mind 'as known' may be different from the mind itself, although there is no such difference with regard to other things when they are known.

If this rejoinder were well founded, it would surely be better to say that the mind cannot be known at all, since that is really the trend of the argument. In any case it would be necessary to give a reason for this remarkable difference between the cognition of the mind and the cognition of other things. Such a reason can never be found by a mere appeal to the nature of knowledge, and if introspection is direct acquaintance or simple inspection there is no possible way of establishing any such difference.

difference between feeling and attention. I should be very hard pressed if I tried to distinguish with certainty the precise presentational differences which presumably flow from each of these, and I am quite certain that the inferences which I actually draw in this matter are due to the fact that I know in advance with greater certainty than I know anything else that, *e.g.*, believing or willing is not the same thing as pleasure or pain.

Dr. Ward says (p. 245) that 'feeling as such is, so to put it, matter of *being* rather than of direct knowledge; and all that we *know* about it we know either from its antecedents or from its consequents in presentation'. We may all agree, I take it, that the whole subjective side of experience is 'matter of being' in this sense. Because it is primarily *thinking* it is not primarily *thought of;* and it is 'matter of being' (I should say) because this subjective side of experience is just the subject itself. This 'matter of being,' I think, is at the same time the whole of our consciousness; and consequently it is the true and proper object of psychology. But these statements of fact (or, if you will, arguments or dogmas) do not imply that it is impossible to attend to our thinking directly when we try; and my thesis is that this operation (and *not* the attention to presentations) *is* introspection and *is* possible.

[1] *System of Logic*, Book III., chap. xxi.

The second possible rejoinder is either innocuous or else depends on a mere definition. We may, and for many reasons we must, distinguish between a thing in so far as we are acquainted with it, and the same thing as it would be apprehended, let us say, by an omniscient knower. This distinction, however, only calls attention to the patent fact that human minds are limited. It does not require us to suppose that there is any difference at all in those respects in which the thing really is apprehended. Again, the word 'object' may be defined in a special technical sense, and understood to mean, for example, something abiding which cannot be directly apprehended at any time but can be known only through a complicated process of intellectual construction and inference. In this sense no 'object' can be observed, whether the mind or a physical thing. Introspection cannot supply more than the data for such an inference: sense-perception is limited to momentary sensibles. This, however, is but a verbal issue. It has to do with the most convenient meaning to be assigned to the word 'object,' and with nothing else of importance.

III.

The theory that consciousness is not a distinctive entity is not necessarily irreconcilable with a certain partial recognition of introspective evidence. Those who hold this view, however, usually disparage introspection on the ground that it is not needed. They claim that it has no peculiar message to convey, and that the facts ascertained by its means can be ascertained with better assurance in other ways.

According to this doctrine, consciousness is not a thing but a function. When we examine our consciousness, it is argued, we find no specific common quality in it. Our consciousness contains things seen and things remembered, friends and clothes and a bank account, images, ideals, and universals. These constituents of consciousness have no common element, except the fact that all of them have some sort of being. They have not, however, a peculiar kind of being. They are not composed of a distinctive kind of stuff, still less of a stuff which is different from that of which physical things are made. On the contrary these self-same constituents of consciousness are also physical things when certain other of their relations are taken into account. The consciousness of any one of us is simply a cross-section of the real, and its limits are determined by the fact that it is selected. The cross-section itself is determined entirely by its relations, and

according to James at any rate, these relations do not refer to any entity such as the mind or Ego, but are simply functions of this or the other conscious content. These contents in one set of relations are 'inner,' in another set they are 'outer'.

According to this view the 'inner world' consists entirely of certain contents or objects of consciousness or, in other words, of presentations. The further argument is that these presentations do not either together or singly constitute a distinctive mental substance. Hence in apprehending them introspectively we do not apprehend a peculiar kind of being, the mind, which cannot be observed in any other way. This same being can also be studied by objective methods of the usual kind. And the final conclusion is that objective methods of study are in almost all cases preferable to subjective or introspective ones.

If the assumptions of this argument were correct, its conclusion might be conceded in principle, although there are many points of detail in which introspective methods would seem to be the only feasible ones on any assumptions whatsoever. The main assumption of the argument, however, seems wholly untenable. The argument is quite baseless unless consciousness and the objects of consciousness (or presentations) are not merely coextensive but literally identical. On this assumption it must be entirely meaningless to affirm that we are conscious *of* presentations, but that the presentations are not our consciousness of them. In point of fact, however, this assertion, so far from being meaningless, is the plain truth of the matter.

The point is so fundamental that it is very easily overlooked. Indeed, it is ignored so persistently on so many philosophical theories that there may be no way of stating it which brings general conviction. Still, this attempt must be made. It is surely manifest that all the objects of which we have consciousness have at least one peculiar circumstance in common. They all *appear*. And the fact that they appear can never be deduced from the fact that they exist or subsist.

It is true that all objects of which we can think must appear to us. The so-called 'inner' and 'outer' worlds, therefore, do not differ in this particular. But they do not appear simply because they *are*, whether or not they are what they appear to be. Being is one thing, appearing or being apprehended is another thing.

Now the fact that a thing appears implies that it appears to something. This fact may be described, correctly enough, as a function or relation of the thing which appears in

connexion with another term. But this function or relation is possible in connexion with one kind of term only. It requires a term which apprehends. This apprehending term is or is part of the cognitive mind. It is the mind as a whole if the mind is correctly interpreted as a mere monad. It is part of the mind, if the mind is a continuum composed of, or at least containing, a plurality of acts of apprehension and other experiences. The principle of this analysis is not affected by the detailed description of the mind, nor is it affected by the answer to the question whether anything exists which is not a mind or not mental. The point is that the two statements 'X appears' and 'X apprehends or is capable of apprehending' are quite distinct. If the second is true of everything then everything is a mind. If it is true of some things only, then these are the only things which are minds.

This argument may be strengthened by the mention of another circumstance. Wherever there is appearance there may be error, and there could not be error unless there were appearance. On the other hand, error could not occur if the fact of being were simply identical with the fact of appearance. It is quite useless to argue, for instance, that mistakes are merely misfits or conflicts of opposing forces. There is a conflict of forces when waves beat upon a pier, but neither the waves nor the pier are in error. Gloves sometimes do not fit, but it does not follow that either glove or hand is making a mistake, or that either has a 'lie in the soul'. Error arises in these and other cases only when the glove is thought to fit when in point of fact it does not, or when the waves or the pier are falsely supposed to have some characteristic which they do not really have (whether or not something else has this characteristic, and whether or not they themselves have it at some other time). Error, in a word, is manifestly *sui generis*. Why is it so hard to see that cognition is so too?

A psychology without a soul may be legitimate in theory, but an account of consciousness which ignores the unique facts of appearance on the one hand, and of apprehension on the other, is not at all legitimate. It is true that a phrase like James's 'world of pure experience' seems to evade the difficulty successfully, but this evasion is due to concealment, and the phrase begs the whole question under the slender disguise of ostentatious neutrality. We may conclude, then, that the problems concerning acquaintance with the mind can never be solved by theories which deal only with the objects before the mind.

Consciousness, properly speaking, is either the common and peculiar property of all conscious processes, or else a name for these concrete processes themselves. In the case of cognition, which seems usually to be the only mental process contemplated in these arguments, the name should be applied, not to the objects apprehended, but to the apprehending of them. This apprehension, and cognate processes, compose the very being of the subject, and the whole problem is hopelessly confused from the outset unless a distinction is clearly drawn between the subject itself and a supposed 'inner world' of subjective objects which are not themselves conscious processes or parts of the subject. It is usual to hold that there are certain subjective objects, such as sense-data and images, whose existence implies a unique relation to the mind if not a necessary dependence on it. This view may, however, be false, and the American new realists may be right in maintaining that these apparently subjective objects are not merely subjective, but have also those objective relationships which define the status of physical things. The difference in this case may merely be one of point of view. But it is the subject itself, not this supposed class of subjective objects, which is the primary if not the only proper object of introspection, and the earlier part of the argument of this paper attempts to deal with our acquaintance with the subject itself.

The question may still be raised, however, whether the subject whose existence has been proved by these arguments can really be better known by introspection than by other methods. All that the arguments show is that if any object appears it must appear to something which apprehends it. Now, granting that we seem to be acquainted with this apprehending entity in introspection, may it not still be true that the body is really the entity which apprehends. If that were so, the body, even in this capacity, might be better studied by non-introspective methods than by introspective ones, just as muscular movements are commonly supposed to be better understood by physiologists than by a psychological analysis of kinæsthetic sensations. Indeed, it might even be true that introspective evidence should always give place to non-introspective whenever the two conflict.

The principal reasons adduced in favour of this theory seem to be the following. The objects of consciousness, we are told, are precisely those which are selected in responsive behaviour. Granting, then, that there must be a term which apprehends these objects, it would seem probable that the body is this term. Moreover, the rôle of cognition is defined

principally by its selection and organisation, and there is good evidence that the body, in actual fact, performs this function. The body is the seat of responsive behaviour, and such behaviour is characterised fundamentally by selectiveness and integration. In particular all the phenomena of attention can be readily and satisfactorily explained upon the hypothesis that attention is a process of bodily response at a very high level of selection and integration, specially adapted to spatial and temporal conditions. This argument is sometimes conjoined with others of less importance. One of these claims that introspection is a very good witness against itself, since careful introspection shows that affirmation, denial, and similar processes are really bodily. The inference is that introspection is capable only of giving a preliminary indication of the character of these processes. Their true character must be studied by other methods. Another argument states quite generally that introspection is often palpably incapable of ascertaining certain facts of consciousness whose existence can nevertheless be demonstrated.

These arguments are not at all conclusive. The objects of perception, it is true, are selected in accordance with the requirements of a conative process, and the conative process subserved by perception is naturally a process of bodily response. Again, the bodily response in this case, is not necessarily immediate, and consequently most of the 'tied' ideas in perception, and some at least of the 'free' ideas connected with it are readily explicable in the same fashion. To suppose, however, that all free ideas, and all the universals of logic or ethics can be so explained, or that all conation can be reduced without residue to bodily response, is to make an enormous assumption which has little to recommend it except the large-hearted enthusiasm of naturalism. What light, for example, can this theory throw upon the pursuit of truth or beauty for their own sakes? Even if this assumption were justified, however, and the analysis of sense-perception could be validly extended to the whole range of knowledge, the conclusion does not follow. Cognition and response need not be identical on account of the mere fact that the objects of cognition define the objects of a certain level of response. On any theory cognition is connected with this level of response and guides it, so that the correlation cited in the argument should not surprise anyone. Moreover, the argument, when fully developed, seems to support a different conclusion from the one it professes to prove.

According to the argument, cognition cannot be defined in terms of anatomy or physiology. It requires the concept of

response, and must be regarded, not as any response, but as a specific type of integrated response which differs, *e.g.*, from a simple reflex or a reflex pattern. And that is not all. Cognition is a specific level of integrated response. In an acquired habit, for example, the response is almost entirely non-cognitive. The cognitive level of the response is a narrow cross-section of the total response.

What is this but the assertion that cognition is that species of response in which there is cognition? The term 'response' itself is naturally understood in a quite general sense which includes conscious processes as appropriately as physical reactions. Accordingly, if the theory that consciousness is a kind of response has any real novelty that novelty must consist in the proof that all responses, conscious and unconscious, have the same characteristics, and that the different levels of response are wholly and completely defined by some particular species of neural integration, or by some specific organisation of bodily behaviour. If no such proof is offered (and there is none to offer) we are left with the fact that consciousness emerges in connexion with certain bodily reactions, and that it is closely connected with these. This fact has never been disputed, but the further and disputable question whether consciousness can be identified with a certain kind of bodily reaction cannot be answered by an appeal to the fact. It can only be answered after an examination of the characteristics of consciousness on the one hand, and of certain integrated bodily movements on the other. A theory which defines conscious response by referring to the existence of consciousness gives no reason for supposing that the characteristics of consciousness can be discovered by other than introspective methods, and, indeed, does not even suggest an alternative method.

Of course if James were right in supposing that all mental processes, when attentively examined by introspection, appear to be merely bodily adjustments, there would be no good reason for distinguishing mind from body, or for relying primarily upon introspection in detailed psychological inquiries. This view, however, seems to be founded on an oversight. Our cognitive processes, it is true, are tinged with bodily consentience, so that affirmation and negation, for example, are experienced along with organic sensations due to the opening and closing of the glottis. If, then, in examining the process of assent we are determined to look for something other than the process itself, the correlative organic sensations are probably the best substitute we can find. If assent and dissent consisted of such sensations, a treatise on the

glottis ought to replace most of the literature dealing with theory of knowledge. But the protasis of this argument seems baseless, however welcome the apodosis may be.

In fact we are directly aware of these conscious processes themselves and not merely of accompanying organic sensations. We are aware also that these processes have quite specific characteristics, that we do not find these characteristics in physical things, and that we do not understand them better by supposing them to belong to physical things. To say that perhaps it is the body which apprehends, is not really more informing than Locke's admission that God might superadd a faculty of thinking to matter. Locke meant primarily, I suppose, that it was impossible to refute this suggestion if it means only that a substance which has certain physical properties may also have the attribute of thinking ; and so he remarked that it did not become the modesty of philosophy to pronounce magisterially on the question. That is obvious. No one has a right to deny that a substance defined by its spatial contour and its habits of spatial movement may *also* have any conceivable number of other properties, provided that these are neither incompatible with one another nor with the spatial properties aforesaid ; and the more these properties differ from physical ones the more difficult it is to prove incompatibility. But a suggestion of this kind is of no value unless the movements and contour of the body help to explain not merely certain facts connected with the range of objects before the mind at any given time but the character of the mind itself. When the body is defined as a physical thing (and how else can it be defined significantly ?) no element in the definition explains either the intrinsic character of apprehension itself or the meaning of such fundamental psychical facts as appreciation or logical consecutiveness. These speculations, in a word, may possibly affect the setting of psychology. They should not affect psychology itself.

It is not necessary, indeed, to maintain that the mind and other things are separated by the whole diameter of being in order to defend the science of psychology, or to show that introspection has a peculiar province. Psychology does not require the support of metaphysical dualism. On the other hand, psychologists should not be obsessed by the fear of dualism, and should not be afraid to admit that the mental processes of apprehending, deciding, grieving, and the like, seem to have very little in common with physical movements, or, indeed, with anything directly pertaining either to molecules, or to the ' things ' of common sense, or to the sense-data

which, according to some modern theories, are the stuff of things when their biography is neglected. This statement, it is true, would be extremely disputable if thoughts consisted of an inner world of presentations mirroring, for the most part, an outer world of things. In that case, James's illustrative reference to the circular panoramas 'where the real foreground and the painted canvas join together'[1] might sound more convincing than Berkeley's fundamental assertion that nothing but an idea can be like an idea. But if the primary object of introspection is the mind itself and not a class of 'mental' or semi-mental presentations, the attempt to deny any fundamental empirical difference between minds and physical objects cannot claim strong support from direct observation.

The other arguments which have been mentioned may be treated more briefly. It is true that the mere examination by introspection of particular mental processes will not explain how these come into being, how they are organised, or what they lead to. Introspection, indeed, may not give more than a surface glimpse of the mind. That, however, is no reason for denying its truth in so far as it goes, and the proper logical procedure is to try to interpret the hidden mind in terms of the mind which appears. One might add, as an *argumentum ad hominem*, that the attempt to interpret the Freudian wish in terms of the integrated response of the nervous system is entirely opposed to the methods and assumptions of the psychoanalysts. Freud and Jung reject physiological aid as heartily as any behaviourist rejects metaphysical.

The argument that introspection is a very inadequate means of detecting the presence or character of consciousness is even less cogent than the others. To say that it is 'a plain empirical fact that consciousness often attends on nervous responses where introspection is unable to bear it witness'[2] is true if the statement only means that it is often impossible to obtain clearly articulated introspective results where consciousness is almost certainly present. The fringe of consciousness is not easily observed, and the reasonable interpretation of it may even require an excursion into the hinterland of the subconscious. These admissions, however, leave the main question unaffected. There can be no certainty that any nervous process is accompanied by consciousness unless we are certain of the consciousness. We may often,

[1] "Does Consciousness Exist?" *Essays in Radical Empiricism*, p. 30.
[2] Holt, *The Concept of Consciousness*, p. 199.

indeed, infer that consciousness was or is probably present, but this inference, in its turn, depends upon introspection. When we know by introspection that some particular nervous response is usually attended by consciousness we may infer, somewhat rashly, that it always is, or we may try to justify our conclusion by arguments based on continuity. In these cases reasonable conjecture takes the place of observation. But introspection is the only means of direct acquaintance with the mind, unless, as some hold, it is possible to be directly acquainted with the minds of others.

II.—THE EPISTEMOLOGY OF EVOLUTIONARY NATURALISM.[1]

By R. W. Sellars.

What I wish to do in the pages that follow is to make reasonably clear just what knowledge about the physical world should mean to the critical realist. If the naturalist has a definite conception of the character of human knowledge, he will be less likely to fall into naïve substance-theories and to suppose that the very stuff and process of the physical world is open to his cognitive gaze.

Critical realism is a form of physical realism. Like common sense, it accepts the belief that there are physical things; and, like enlightened common sense, its idea of physical things is moulded by the conclusions of science. Now the common character of all modern realisms is the principle that the objects of knowledge do not depend, for either their being or their nature, upon the knowledge of them. To know is not to *form* the reality known out of *a priori* and *a posteriori* material of a mental provenance, as Kant held; but to gain information about it as it exists in its own circle of being. Being is one thing, and knowledge is quite another sort of thing, a function of mind in causal relation to that which is known. We shall have to amplify and explain these statements, pointing out the difference between existents and subsistents and showing that it is only for existents that a causal relation is implied in the possession of knowledge. But there can be little doubt, I take it, that knowledge implies this independence on the part of the reality known. We think of knowing as an event in the history of a mind, an event which does not modify the reality known. For if modified, how could we possibly know the reality as it is?

At the level of common sense, knowledge is *on the whole* regarded as an apprehension by the percipient of the things about him. He is aware of them. They are open to his inspection; they come into, and pass from, his field of experience. These sensible, physical things are regarded as

[1] A chapter of a book to be entitled *Evolutionary Naturalism*, and dealing with the main categories of our knowledge about nature.

independent of this awareness and relatively permanent; therefore common and co-real. It is within this setting and in relation to these meanings that the idea of knowledge is formed.

This structure of the field of experience and these meanings cannot be mere accidents. They must have their deep-lying causes. If physical realism is correct and there are physical existents affecting the percipient organism, we can readily understand why these realistic meanings have developed within experience. Realism and realistic meanings imply each other. As a matter of fact, there is hardly a system of philosophy which is not to some degree realistic. Subjective idealism is not in favour, though it is often discarded rather than refuted. What critical realism seeks to do is patiently and persistently to develop an idea of knowledge which fits in with the obvious position and circumstances of human beings.

Let us, first of all, see what common sense takes knowledge to be. We can go on to modify it and improve it as a wider reflexion demands. Logic and psychology can be called to our aid in this task of interpretation and improvement.

The assumption that knowledge is an awareness of objects independent of this awareness is an inevitable reflexion of the structure of the individual's field of experience. If things are external and co-real, and I just 'see' them, my seeing them makes no difference to them and is primarily an event which happens to me. The fact that my sense-organs are stimulated so that the action is *from the things to me*, as well as the fact that I seem able to change things only through the overt action of my organism, confirms me in the belief that this awareness does not modify its objects.[1] Thus common sense would, I think, hold that I perceive this brown-covered book on my desk just as it is, although not exhaustively. There is more to the book than I perceive at any one time, yet in veridical perception I do not perceive falsely. The book is, in part, the content of which I am aware. Yet, in spite of this confidence, enlightened common sense is puzzled by the description of the physical thing which science gives. How can colour be subjective? And what is the relation of these imperceptible atoms to the sensuous object perceived?

Now when we call logic and psychology to our aid, we find that perception is not the simple awareness of an external object it appears to be on the surface. The more sensuous

[1] The informed reader will note that I am touching upon the question of relations. I am not in sympathy with the usual general approach to the question.

part of the content, which we may call the sense-datum without being held guilty of sensationalism, is penetrated by meanings and even interpreted by concepts. I perceive this object as a *book*. There is judgment at work, and universals are being used. Is psychology wrong when it asserts that perception involves mental activities and a synthetic unity of sense and meaning? Furthermore, does not this particular perception arise within the general setting of what may be called the perception of the external world? The complex experience called 'perceiving a book' can be analysed into a *complex datum interpreted by concepts as being an external, permanent thing of the book type, of which I am actively aware.* And this awareness is the empirical subject-self using these concepts and compresent with the complex datum. The awareness may sink in consciousness to compresence in consciousness of an interpreted datum and the self. And it is well to bear in mind that the self has different levels and intensities.

One of the points the critical realist wishes to make is that there is a profound truth in the outlook of common-sense realism despite its inadequacy. The plain man is outward-looking, and accepts results at their face value. The sense of thinghood in the external world dominates his perception. The justified function of idealism, so far as it speaks for real physiological, psychological, and logical facts, is a war against the simplicity of common sense, its ignorance of processes, its belief in an abrupt givenness of physical things. Unfortunately, it has usually gone beyond this toward the denial that we can know physical reality, either with the frankness of a Berkeley or with the subtle scepticism of objective idealism. Critical realism is as much a physical realism as is common sense; but it is to common sense much as the chemist is to the man who works in a chemical factory. In other words, critical realism is an epistemology which seeks to do justice to all the facts which bear upon our final interpretation of the nature and conditions of knowledge. Reflexion soon convinces the thinker that physical existents cannot appear in this literal way within the field of experience, and that, because of this fact, knowledge of the physical world cannot be an immediate awareness of it. These contrasts will become clearer as we proceed. The query we are developing is this: If we do possess knowledge of the physical world, what must be the nature of this knowledge, seeing that the contents we apprehend are non-physical?

There are two distinguishable elements in perception: *the affirmation of a physical thing, and the awareness of the*

complex content which is somehow identified with it. Thus we perceive the physical existent affirmed by apprehending the given characters presented. It is, we feel, this kind of a thing that exists. These characters are its qualities, and to apprehend the qualities is to apprehend it. Content apprehended and existent seem to us, as yet, inseparable. The content of perception and the object of perception are fused. Things are apparently given to inspection.

But logic and psychology show us that realistic meanings and modes of behaviour—the two, by the way, are closely related—attach themselves to the presentational content given to the self in perception. It is in this way that the rise of the naïve category of thinghood can be explained. Things are independent, co-real with the individual, spatial, and possessed of dynamic capacities. They are objects to be reckoned with because they are full of consequences for our life. All these empirical predicates must be true of an object before it can be regarded as physical. The development of this outlook is genetically traceable, and no modern psychologist would feel much difficulty before its analysis. The point to note is, that these predicates are attached to a presentational content; and so the sensible thing is made. We are aware of the content fused with realistic meanings and naturally assume that we are aware of the physical thing affirmed.

But a critical study of the internal and external conditions of perception has revealed to reflexion that common sense was too hasty. The *content* of perception, which has been identified with the *object* of perception or the physical thing affirmed, is found to be numerically distinct from it and essentially a function of the percipient organism under stimulation. The physiological conditions of perception are now well known. But their recognition does not imply acosmism of the Berkeleian sort. It does signify, however, that the direct awareness within the field of experience of the physical thing is impossible. The content of perception is not the physical thing affirmed as co-real with the percipient organism. Or, to put the result in still another way, the physical existent is not a sensible thing.

We may summarise our conclusion as follows: *No motive has thus far entered to cause us to doubt the existence of physical realities co-real with the percipient self, but reflexion has discovered that the objective content with which we at first clothe these acknowledged realities is intra-organic.* In other words, we can no longer believe that we can inspect the very nature or specific qualities of the physical existent. The

question is beginning to arise in our minds whether physical existents, themselves, have a sensible nature. May not the fusion of affirmation and content, at the level of perception, have entirely misled us? May it not have suggested too simple an idea of the nature of our knowledge, on the one hand, and caused us to think of the existent as something *like* the content, on the other? It is thus very natural to think of the physical existent as an imperceptible sensible thing. The nature of our knowledge of the physical world has become an engrossing problem.

But let it be noted that neither subjective idealism nor agnosticism is justified by this result of reflexion. And I hope that philosophy has got beyond the stage of jumping at hasty conclusions. What is needed is a patient analysis which goes forward step by step *under the guidance of the facts.* The facts which break down common-sense realism work within a realistic set of affirmations and attitudes. Hence, there is no movement in the direction of subjective idealism. *On the other hand, only if knowledge must be an awareness of the physical existent, itself, is agnosticism implied.* But what right has a thinker to shut out other possibilities by such a dogmatic assumption? It is far more logical to suppose that knowledge of the physical world is not an apprehension of it in the manner of naïve realism, than that we do not possess knowledge. Agnosticism is a counsel of despair. It is obvious that the nature of knowledge has come up for radical investigation.

Who can deny that reflexion partly finds present, partly extends, the distinction between the realm of consciousness as a field of contents and processes somehow connected with the organism, and the acknowledged world of which any such organism is only a part? And patient reflexion only develops this contrast.[1] The actual *content* of all *apprehended objects* turns out to be non-physical. It is subjective, personal, bound up with the particular percipient organism. In a word, it is what we are accustomed to call psychical.

The paradox of the situation is that what is apprehended discovers itself to consist of characters which have no substantiality. Discriminate as we will, we find only sensible characters and meanings; and yet we feel that the reality which surrounds us cannot be any sum or organisation of such elements. Where is the executive push of things which makes them have effective consequences? The psychical characters do not consume wood or shatter fortresses

[1] *Cf. Critical Realism*, ch. iii.

into fragments. We tend to believe that we grasp an external reality in an intuitive way so that its councils and pulsating energy are open to us, and the tragedy is that what we grasp has no such dynamic power. Being escapes us. And what is true of common-sense realism is equally true of scientific realism. What are mass and energy but quantities? And are quantities self-sufficient realities? The very stuff and being of the physical world again eludes us, while we are left with contents hanging in the air, as it were, and yet masquerading at the least excuse as self-existent and substantial.[1] We are led to ask ourselves whether being can be given. Is not the sensuous *content of perception* a peculiar substitute for the *object of perception?* The object of common sense breaks down for reflexion into a self-existent reality, which cannot be given to awareness and a complex datum which is so given.

But this discovery that only subjective contents are given is a fairly common possession of modern philosophy. It must be remembered, however, that these subjective contents of perception are objective within consciousness, that they are subjective only in the sense that they are in the individual percipient and not a part of the physical environment to which the conscious individual is reacting. Nor within consciousness need these contents be regarded as dependent upon the conscious self's awareness of them. Self-aware-of-content is a complex of a unique sort, the parts of which are together; and as these parts are contents they do not modify one another. At any one time, I am in the field of what is given together. *The being of the content is not its being perceived, and yet the content is psychical and within consciousness.* But this conclusion only excludes naïve realism. It proves that only mental contents can be given in consciousness; it does not prove that we can know only phenomena. The mistake of philosophy has been to confuse these two principles; or, rather, to deduce the second from the first. Yet, unless givenness is clearly the only kind of knowledge, such deduction is unjustified. Uncritical as such a dogmatic assumption is, it has been at work in modern philosophy to a disastrous extent. Kant indicates—in this following essentially Locke and Hume—that only phenomena can be given, and interprets this fact as meaning only phenomena can be known. The whole setting he gives to epistemology is a subtle begging of the question.

But when we recoil from the agnosticism of Kantianism

[1] The old-fashioned forms of materialism were cases of this mistaking of concepts for things.

'camouflaged' by the substitution of experience-in-general for the structure and demands of the consciousness of individual knowers and the identification of the physical world with constructs within this blanket experience, and return to a critical development of the leadings within common sense, we soon see that we humans do possess information about the physical existents we affirm. Within consciousness, we are acquainted only with contents; but what is to prevent us from regarding these contents as *material* for knowledge about the physical existents which we continue to affirm? What necessity is there for holding that *all* knowledge terminates on sensory contents? *That* is a sophisticated view which results from analysis and the abstraction from the meanings and attitudes of common sense.

Now, as I understand it, critical realism stands for the reality and fundamental significance of another kind of knowledge, a knowledge which presupposes this interpretative awareness of the data of observation as a foundation; and yet goes beyond it in the reference of propositions, built upon these data, to physical existents affirmed as knowledge about them. The propositions are within consciousness, the reference is an act in consciousness; but the existent, which is the object of such knowledge, is not in consciousness. The object of knowledge is identical with the object of perception; but, whereas in perception we tend to clothe the object in the apprehended content, we now think of the content as *material* for obtaining knowledge about the object.

Let it be granted that the very existence of knowledge about non-apprehensible objects implies a correspondence between the nature of the object and the character of the sense-datum so that we cannot regard the character of the sense-datum as arbitrary. If, under apparently the same conditions, an object changed its appearance in a capricious way, it would be impossible to regard presentations as material which could mediate knowledge about their controls. But our experience indicates a specific correspondence between physical existent and datum. One flower is white, another is blue, and so on. These differences are rightly taken by all to point to differences in the physical objects. Again, a difference in perceptual position is always judged to correspond to a difference of position on the part of the physical things.

But what is the exact nature of this correspondence? We should realise by now that no dialectical answer will do justice to it. We must appreciate the psycho-physical situation. A determinate existent is the object of the

organism's nervous attention and so controls the rise in the brain of a content of which the subject-self is conscious. The character of the stimulus must be *correlated* with the specific content aroused, but we have no reason to postulate a likeness of content. And what holds for specific qualities holds for such contentual differentiations as positions, distances, and structure. The sensuous contents are not *like* that which controls their rise. And yet, in spite of this denial of the meaningfulness of contentual identity between object and datum, there is every reason to assert a *differential correlation*. It is this differential correlation which makes presentational content the material for knowledge about the physical realm. Knowledge must be quarried out of it by patient comparison and ingenious experimental control. But is not that precisely what science effects?

In order to appreciate this information about physical existents mediated by the data of observation, it will be well for us clearly to distinguish it from all forms of the copy-theory. The copy-theory in all of its forms and gradations assumes that the content aroused in the mind is like the content of the corresponding object. *The master assumption in this view is that physical* existents have, or are, contents of this sensuous nature. But the very uniqueness of consciousness would seem to preclude such a view. I presume Berkeley had this point in mind when he said that a sensation can be like only a sensation.

The tendency of the mind to maintain the copy-view is easily understood. Just because common sense clothes physical existents with sensuous qualities, it retains doggedly this sort of *imagination* of them even when it is forced to admit that they are not direct contents of perception. Hume condemns the 'philosophical hypothesis' that physical existent and percept are numerically different yet resemble each other. He does this partly on the ground of parsimony. Yet representative perception always has a vogue. The physical object retires into the background as imperceptible, but it is still conceived as a double of the sensible thing or content of perception. Representative perception is the perceiving of the physical existent through its reproduction.

The usual criticism of representative perception is interrogatory: How can you know this to be true if you are limited to the content of perception? The criticism which I have offered is, I think, a deeper one. It points out the cause of the illusory tendency and shows that the facts indicate a differential correlation of sensory content and physical existent, two entities which are not co-ordinate because one is substantial and the other not.

In this connexion, it may be well to point out that the traditional categories of thing and its qualities also rest upon the naïve form of realism. The qualities are the content of perception thought of as somehow attached to the thing. Every student of philosophy knows into what difficulties this mode of approach got medieval systems and, through them, Locke. The thing becomes an unknowable substance somehow supporting qualities. Critical realism turns its back upon this whole mode of approach. The physical existent is substantial in the sense that it is self-existent—though this self-existence does not preclude dynamic continuity with other parts of the physical realm—but it is not a substance in the Lockean sense. It has a determinate nature, but this nature is not something separable from it in the form of qualities. Knowledge about the existent is knowledge about its nature and, by that very fact, knowledge about it. The epistemological situation is, that we are confined to knowledge-content and its reference. We can think of the existent only in terms of knowledge.

Having, I hope, set the copy-theory at rest, in its form that there is an *identity of content* between physical existent and psychical content, I can now proceed to develop what I have called differential correlation. This correlation is not of the sort championed by the advocates of psycho-physical parallelism. There is obviously a causal relation between the terms correlated in the present case. Hence, that which arises in consciousness is not arbitrarily correlated with the complex of stimuli bearing upon the organism. We may speak of the terms as agreeing, or of the datum as conforming to the stimulus-complex without any content agreement implied.

The presentational complex is, therefore, in a delicate causal correspondence with the physical objects perceived. In this sense, the physical world reveals itself in the data of observation. It is a revelation which can afford the justification for the sort of knowledge about the physical world that we possess. The relation between physical existents and presentational complexes is purely natural and causal. It mediates the sort of data that are responsibly reflective of the physical world. Just because man is an organic individual he cannot expect to be in a more direct cognitive relation to other things than this.

How, then, must we adjudge the status of the presented content in perception? Existentially, as an intra-cortical content to be correlated with the perceived object; epistemologically, as the contentual material out of which knowledge

of the object can be gleaned. And one of my main contentions has been the undesirability of setting up an uncritical notion of what knowledge of the physical world must be.

The general conditions of knowledge are twofold: (1) the presence of data; and (2) the intelligent use and interrogation of these data in the way of analysis and synthesis, the formation of hypotheses, the construction of abstract concepts. In the chapter on the mind-body problem, I shall attempt to show that the capacity for both these factors is to be assigned to the brain; the brain, however, risen to the level of conscious functioning. What we are permitted to accept is a complex stimulation of the brain which is welcomed and furthered by the brain in accordance with its own nature and interests. The conscious brain-mind is interested in reality because of its adaptive function, and, like a skilled lawyer, draws out its story bit by bit and puts it together in its own language. The physical world must be assisted toward its unintentional self-revelation by such an organ as the brain-mind if knowledge is to arise.

And this setting of knowledge-content allows us to claim a genuine conformity between it and the physical existents known. The situation is, of course, unique, and metaphors will not much help us. We are confined to the mental side and can never literally grasp the existent known. Penetrative intuition or literal inspection of the physical world is impossible just because we are what we are. The conformity between knowledge-content (understood propositions) and determinate being rests upon such a use of the revelatory data as to enable us to gain insight into the determinate structure, capacities, and relations of physical things. Being is determinate, and knowledge patterns after it in accordance with its own medium.

II.

Having laid and defended our critical foundation for physical realism, let us now proceed to develop its implications.

We have said that knowledge about the physical world is just the information made possible by the intelligent use of the data of observation. We come to our decisions that physical things have size, exclude one another, are massive, have position, have structure and organisation, have capacities for action, behave in certain describable ways. We develop a *claim* to knowledge of this sort which no scepticism has really weakened. And until this claim is disallowed, we shall *think* physical reality in terms of our knowledge. *It is this thinking physical reality in terms of our knowledge*

which the conformity of our knowledge to reality means. The second is just the reverse of the first. The tests of conformity are internal and are the tests of particular judgments, from the level of perceptual judgment to the more abstract levels of thought. But we have tried to give the whole construction its ultimate foundation by pointing out the responsible conformity of perceptual datum to the physical existents which are the objects of perception. The validity of knowledge is its conformity to reality.

In the light of this interpretation we can examine the structure of our critical knowledge about physical things. An explicit act of knowledge seems to involve at least three factors: (1) the affirmed existent with its determinate nature and continuities; (2) the propositional content within consciousness; and (3) the act of reference of the second to the first as informative of it. This analysis separates what is given together in a complex act of judgment, and yet it does not falsify the facts of the case. It appears that these factors are distinguishable in any judgment concerned with physical things. The physical existent is the subject of the judgment, and its name or symbol is the subject of the proposition; the predicate is the information about it; and the copula indicates the reference or relevance of the two. We think the existent affirmed in terms of the 'objectives'—to use a word of Meinong —*that* it has a particular structure, size, position, powers, etc. It should be noted, however, that critical realism differs from common sense in that it does not suppose the subject of the judgment to be literally presented nor does it assign to the subject any sensuous content. We *mean* the thing rather than see it, and our knowledge is not a picturing but a series of abstract statements for which data are merely the cues.

The easy way in which the realistic judgments of common sense can be developed into the frame-work of critical realism drives home the point I made earlier, that critical realism can retain the truth of common sense while passing beyond its naïveté. It also accounts for the fact that the critical judgments of science attach themselves to the matrix of common sense with such readiness. All the time, however, we know that science deals with the imperceptible. The *object of perception* is identical with the *object of knowledge*, and so the subject of judgment is the same; but the interpretation of this object is different in the two cases.[1] For the one, it coincides with the content of perception; for the other, this

[1] Those who wish a more detailed comparison of the judgment of naïve realism with that of critical realism will find it in my *Essentials of Philosophy*, ch. xi.

content is a mental datum correlative with the object. It is an *appearance* of the object.

In this setting, it may be worth while to point out the ambiguity of the term *imperceptible*. Distinguished philosophers have written to me saying that they could not believe in imperceptibles. But do they not ignore the distinction which the critical realist makes between the content and the object of perception? The physical existent is *not* an imperceptible if you mean *object* of perception; it is an imperceptible if you mean *content* of perception.

And this distinction rests upon the nature of the act of perception itself. *The percipient organism attends to the object of perception.* We can see the focusing of the eyes, the tension of the head, the directive set of the body. The psychologist knows that the instincts and interests of the organism are aroused and are finding expression in this *behaviour*. We have a behaviour-attitude. And correlative with this is the *content* of perception, which is to subject-self within consciousness as the object of perception is to the behaviour-attitude of the organism. It is this parallelism which leads common sense to merge the correlatives and so identify content of perception with object of perception. All that critical realism does is to distinguish what is distinguishable, and so prepare the way for a satisfactory synthesis which will cover the facts which break down naïve realism.[1]

Another implication needing stress is the absence of any cognitive relation between the physical existent known and the propositional knowledge about it. Past philosophy made much use in its dialectic of the subject-object relation. Idealists held that the object is internally bound up with the subject or knower, while the neo-realists countered with the idea of external or non-modifying relations which left the reality the same whether being known or temporarily outside the cognitive relation. The *ideal* of knowledge certainly favoured the realistic plea; and yet the battle was drawn. What critical realism does is completely to change the problem from dialectic to fact. If the physical existent is extramental, it is nonsense to speak of a cognitive relation between it and the act of referred knowledge. Such a relation could only be transcendental and non-natural. And like all transcendental relations we soon find that it is absolutely unnecessary.

The physical existent is not an object in its own right. It is *made* an object by the selective activity of the percipient organism. And this selection is behaviour on the part of the

[1] The chapter on the mind-body problem will perform this synthesis. See, however, an article of mine in the *Philosophical Review*, March, 1918.

organism, preliminary, usually, to overt action upon the existent selected as object. It is an adjustmental activity of the sort described above. The relation of the existent to the organism is causal; it is the source of stimuli. But the selection of one existent rather than another *as object* is due to the interest of the organism.[1] At the level of perception, therefore, we have the following correlation: objectively, or physically, an organism focusing upon one of many stimulating existents and making this existent its object, an action to which the existent is quite indifferent; subjectively, or in consciousness, a content growing in clearness as the self attends to it and initiates those adjustments felt as movements of the eye and head, etc. There is a togetherness of the content and the self in the unity of consciousness. Back of this togetherness is a functional activity of the organism, but there is no causal relation between content and self in consciousness. Between existent selected by the organism as object and the organism there is, on the other hand, a causal relation but *in the direction from existent* to organism. This factual analysis shows that there is no peculiar cognitive relation between the object and the percipient organism.

And what is true of perception is equally true of critical knowledge. The act of reference is a selection of an existent as object of the knowledge-claim. This selection is an internal process mediated by spatial and temporal distinctions. Thus I *mean* (select) the house five blocks from me on the right-hand side of the street. Instead of speaking of a cognitive relation, it would be far less ambiguous to speak of a *cognitive selection*.[2] But as soon as we do so, the dialectic controversies fade into their proper nothingness. The traditional maxim, "No subject without an object, and no object without a subject," can only mean that in perception and cognition the organism selects an existent as object, that is, as what it focuses itself upon. But philosophers have not well enough noted this relativity of *objectness* to the organism, and have interpreted the maxim as meaning no existent without a subject, which is untrue.

Physical realism must also defend itself against the phrase, "transcendence of experience". Experience is one of those blanket terms which have made epistemological analysis difficult. It seems nonsense to say that I can transcend experience. But as soon as I realise that experience means both consciousness and knowledge, the situation begins to

[1] The critical realist and the neo-realist have much in common here, but the neo-realist has confused the content with the object of perception.

[2] See *Critical Realism*, ch. viii. for a fuller development of this point.

clear up. I can transcend my consciousness, not in the sense that I can get outside of it in any literal way, but in the sense that the knowledge I build up in it can by an act *in consciousness* be thought of as interpretative of an existent affirmed by the conscious self as co-real. It cannot be too much stressed that consciousness is simply a term for the field of experience with its empirical structure. In this field the subject-self, which identifies itself with the organism, is the only existent accepted besides the objects perceived and thought about. To affirm these co-real objects is not to transcend consciousness. To so interpret functional acts in consciousness is to picture everything in a quasi-spatial way and so to create puzzles where none exist.

But I think that Kant's experience-in-general in which physical things are constructions has had much to do with the vogue of this bogy about transcending experience. And I shall say no more about this aspect of the controversy, for, if my approach has not already undermined Kantianism, I cannot hope to do it here. Kantianism and critical realism are incompatibles.

But 'transcend experience' has sometimes meant to transcend knowledge. To this we would simply reply that we do not want or need to transcend knowledge. If experience reaches as far as knowledge, we are satisfied. If I experience a person when I know him, experience is just another term for knowledge.

Finally, I would point out that the critical realist prefers such terms as selective reference or internal pointing in place of transcendence with its spatial associations. In knowledge we neither transcend consciousness nor knowledge. Referred knowledge is a function of consciousness, and consciousness is not a stuff which we have to walk out of in knowledge. Philosophy must be empirical and not be ridden by metaphors.

In the argument of the book, I shall constantly make the statement that we do not know the stuff of physical reality but only have knowledge about physical reality. Let me here anticipate the more serious objections which may be directed against such a statement by those who have not grasped adequately the implications of critical realism.

The assumption that we can know the stuff of the physical world gets its measure of plausibility and meaningfulness from two really opposed approaches. The naïve realist supposes that he intuits the physical thing itself. Knowledge is an awareness of the very inherent and essential qualities of the physical world. And is not this awareness a knowledge of the stuff of the world? There may be more to it than is revealed,

yet this more would be continuous with, and not essentially different from, what is revealed. Traditional materialism is, I presume, simply a scientific refinement of naïve realism in which secondary qualities are removed and master contents like mass and motion developed in the place of the more sensuous primary qualities. The world is abstractly intuited.

The other mode of approach to a knowledge of the stuff of the physical world is through analogy. The idealist holds that in consciousness we have a direct acquaintance with a substantial stuff which can be assigned by analogy to other reals. Panpsychism develops its theory of reality in this fashion. But is consciousness of a nature to bear this burden? Does the knowledge about the physical world which science achieves fit this flow of contents we know so well? I have never been able to persuade myself that it does. Consciousness is real—of that there can be no doubt—but is it not a flow of contents expressing and guiding the functioning of some more substantial reality?

But if neither by an intuition of external reality nor by an acquaintance with it in ourselves are we able to get into cognitive inspection of physical being, it would seem to follow that the ideal is impossible of attainment and so is, in a measure, illusory. The more we reflect upon the situation, the more do we ask ourselves what is really wanted. Physical existents are; they can be disintegrated theoretically into, say, electrons; but if sense-data are mental contents they cannot *reproduce* the electron and so reveal its stuff or essence. And are not these latter terms mere words? They symbolise what we feel must be there—something to account for what takes place, something as basis for structure and position. But must we not admit that we cannot get nearer to it? By our very situation and the very nature of consciousness, being eludes us. To know physical reality is not to grasp physical being. If this be agnosticism, it is at least of a peculiar kind. It is agnosticism only in relation to an uncritical ideal for the reach of human knowledge. It is not agnosticism of the traditional type with its contrast between knowable phenomena and unknowable absolute. We do have knowledge about physical reality, but we do not have a penetrative intuition of it. Let him who has it tell science what electricity is, and not merely what it does under specific conditions. *Knowledge has its place in consciousness, which is, itself, in an organism reacting to its environment.* Such knowledge necessarily has its limitations. Knowledge is other than being. But because it is knowledge, conformable to reality, it guides the human organism in its perilous effort

at adaptation to, and control of, the parts of the universe in which it finds itself.

Knowledge of another consciousness is different from knowledge about the physical world. *The first is a knowledge through asserted identity of content; the second only information-about with no identity of content.* Thus when I interpret an expression on the face of my friend as meaning amusement, I use the expression as a symbol of a contentual experience which I regard as, in its essentials, the same for him as for me. Words which he uses are likewise admitted symbols of mental contents sufficiently identical in character. Such identity of meaning does not conflict with the numerical difference of existence of the two mental states implied.

This difference between the two kinds of referred knowledge coincides with the difference between the two realms. Were the physical world not, in some sense, other than consciousness, we should not expect this fundamental contrast in type of the two claims. In the one case, the data (expressions, gestures, and words) are natural or arbitrary symbols of mental contents; in the other case, they are not symbols but cues for the construction of propositions. It is the claim of critical realism that it can suggest an evolutionary naturalism for which consciousness and the functioning brain can be thought of as continuous and one natural whole *by very reason of this difference in our knowledge of them.* Just because of its more adequate epistemology, it can harmonise what naïve materialism hopelessly separated or only verbally connected. Just because consciousness is not a physical thing, it can be inserted into the brain. Panpsychism tries to smooth over difficulties; evolutionary naturalism conquers them by its more adequate analysis.

Critical realism has little difficulty in formulating the idea of truth implied in its theory of knowledge. Trueness and falsity are terms of approval and disapproval applied to judgments or claims to knowledge. Some judgments have turned out to be mistaken, and therefore the claim of a belief is theoretically disputable. When with this possibility in mind we say that an idea is true, *we mean that it is a case of knowledge as it claims to be.* It would seem, then, that the knowledge-claim is logically prior and is the important element in the meaning of truth; and knowledge demands the correspondence or conformity of the asserted content with reality.

But when the idea of trueness is merged in the body of truths accepted by the human mind, truth is apt to contain other elements of meaning of an historical sort. Truth is something that grows and increases in volume and signi-

ficance. Old ideas are re-interpreted and new facts assimilated. I presume all thinkers would admit the genetic development of the systems of judgment which are now generally claimed to be true. Knowledge is not something machine-made. Parts of it are more or less adequate, more or less undergoing change. We are passing judgment upon the empirical content of various times and temporarily, perhaps, neglecting the idea of trueness.

We must also distinguish the *meaning* of truth from the *criteria* of truth. The criteria must be intra-experiential or empirical. I presume science lays almost equal stress upon fidelity to fact and coherence. Those ideas pass as true which agree with facts of observation and show a capacity, due to their content, of organising these facts in an explanatory way.

There has been, I think, a clearer understanding of these distinctions of late. Pragmatism can be credited with part of the glory, and realism with a goodly share of it. The rôle of idealism is more obscure. I would suggest that its chief value has been as a protest against the immediacies of neo-realism. Pragmatism has itself been developing away from its original stress on the feelings.[1] Its chief fault still appears to remain, *viz.*, an unwillingness to admit the implications of the knowledge-claim. It lives too exclusively in the temporal dimension of experience.

Brief as this discussion is it must suffice. All realists, I take it, admit that particular judgments may be absolutely true. When I assert that Columbus discovered America in 1492, this judgment is either true or false. Judgments may supplement each other and so form a system, but the individual judgments need not depend upon the system. Is it necessary to add that truth must not be used as synonymous with reality, as many objective idealists have been inclined to use it? Truth is a human affair. It is, however, not arbitrary, but, like knowledge of which it is the confirmation, strictly controlled by responsible data.

Finally, a few words at least must be said about the distinction between subsistent and existent. The new realists make much appeal to the subsistent as something equally real with the existent and yet not reducible to it. The self exists, the physical world exists, but geometrical objects, numbers, space, time, universals of all sorts, facts, ideals *subsist*. It is not always easy to decide what is meant by this contrast. Sometimes we hear mention of three kinds of being: the mental, the logical or subsistent, and the physical. And yet two of these are said to exist, while the third subsists.

[1] As I write this, I have received a thesis of a pragmatist entitled: *William James and Pragmatism* in which James's shortcomings are scored.

Frankly, the critical realist does not like this use of the term being. The very abstractness of the term is apt to lead to unreal puzzles. To admit co-ordinate kinds of being is to proclaim species of a genus; and what is more natural than to be challenged for both the differentia of each species and the common character which makes them belong to a genus? We have already hinted our belief that consciousness as a whole can be included in the physical realm when this latter is properly interpreted. We have argued that physical being cannot be grasped. What we can do is to state the essential characteristics of the physical realm as these are found in our knowledge about it. The realm of consciousness does not fit these characteristics; therefore, it cannot simply be identified with the physical realm, as panpsychism attempts to do. But a little reflexion shows us that we are acquainted with the one realm as we are not with the other. The exclusion cannot be one of inspection as has only too often been supposed. Moreover, the relation between them need not be one of identity in the sense that there is no difference between them. We must enlarge our notions of relationship and make them more empirical. An existential relationship is different from a logical relationship of likeness and difference. *Logical relations hold between objective contents in consciousness alone.* To anticipate our more detailed argument in a later chapter, we may say that consciousness is a functional expression of the brain, and so internal to, and continuous with, physical reality. And this relationship is existential. Only he who supposes that he can so intuit the whole being of the brain as to be certain that consciousness is not there has the logical right to reject this hypothesis to which all the empirical facts point. I presume that Bergson in his repeated declaration that consciousness cannot be in the brain is building upon his assumption that the material world is really space. Descartes still pursues the anti-intellectualist. To grasp time and throw it into the face of space as a fourth dimension is dialectical and not empirical. Epistemology must dig below these dialectical contrasts. It is the cherished persuasion of critical realism that it, alone, offers this possibility.

We come now to the distinction between the mental and the subsistent. To regard the logical or subsistent as a part of the mental used to be the unfailing course of philosophy. Such contents are for Locke ideas. And these ideas are contentual objects of the understanding when a man thinks. Let it be remembered that, for the critical realist of to-day, the *object* of perception and the *object* of cognition (knowledge-content, objectives, ideas) are mental subsistents which are

as they are experienced. But neo-realism with its tendency to identify consciousness with a reference to an object, or with a transparent awareness, or with a class of entities, seeks to avoid subjectivism by making a functional duality in consciousness into a dualism. We, on the other hand, have avoided subjectivism by attaining a more adequate notion of knowledge and making it a function of the whole of consciousness, a notion which does not eviscerate consciousness of concrete content and fits in with psychology.

The distinction between contents of which we are aware and the awareness of them is capital and must not be ignored. Cognition is not, however, a sort of immediacy; the self is alert and joins itself to concepts interpretative of the data intuited. Thus even the knowledge that terminates upon contents within consciousness is more than feeling. The self thinks the data. When there is a distinct problem, this process is very apparent; but it is always more or less there. When interpretation is at a minimum, either because no problem has clearly arisen or because the problem is solved, the objective content faces the self as an object of awareness. Now my argument is that this complex, "self aware of objective content," is a characteristic structure of consciousness.[1] It is carried over from perception to conception, from perception of objects to awareness of contents. *All that is needed is a loosening of the content from the meanings of thinghood. The content then stands out in its own right.* Such contents are called subsistents. Abstract space, time and number are not physical things, yet they are objective contents of thought. They can be analysed and synthetised. Did not the mind have this capacity, there could be no science. Thought deals with conceptual content.

Let me connect this structure within consciousness with the perceptual situation of the organism. It will be remembered that I laid stress upon the parallelism between the behaviour-attitude of the organism and the thing which it focuses upon (the object of perception), on the one side, and the two poles of consciousness, the subject-self and the content of perception, on the other. There is a duality on both sides that cannot be ignored. The content presented to, and interpreted by, the subject-self is to this self much as the thing is to the interested organism. The realist believes that this structure within consciousness is no accident. It is surely a functional reflexion of the situation of the organism. The perceptual datum is a mental substitute for the thing to which the organism is reacting, and the conscious self is

[1] See *Critical Realism*, ch. v.

interested in it for that reason. The situation of the organism is projected into consciousness. The subject-self as the representative and conscious expression of the instincts and purposes of the organism is to the organism as the sense-data are to the thing. The independence of the two terms which are extra-mental is reflected in the independence of the two poles of consciousness, the self aware and the contentual object of its awareness. And, if I am not mistaken, psychology admits that the presentational side of consciousness, connected as it largely is with special areas of the brain, has this sort of independence of subjective interest. Of course, the two poles are inseparable, yet there is no causal relation between them. The subject-self selects,[1] it does not create or change data.

It follows that I agree with much of the analysis of the English neo-realists in regard to awareness and its contentual object. Yet I am convinced that they have robbed awareness of its actual content by separating it from the interested and interpretative subject-self. Their other mistake was to regard the contentual element, or idea in the Lockean sense, as non-mental. As I have already argued in my *Critical Realism*, this total structure is an affair of consciousness in the psychological sense of that term.

Now as the practical attitude demanding action becomes less dominant, this perceptual structure remains, but is transformed. The very personal, active self becomes more the thinking subject, while the perceived *thing* becomes more a content of which the subject is aware, one of his thoughts. This content or idea may be a sense-datum or a very abstract complex, symbolised by words. But if my argument above is correct, this idea is mental and dependent upon the brain. The subject is just as mental, but is the centre of control and organisation. These ideas are what it is now the fashion to call subsistents. Their coming and going are events indifferent to their nature. What is given *to* the subject is the content and not the content's existence as a mental event.

Yet genetic analysis soon convinces the unprejudiced thinker that all ideas, even the most abstract, have their roots in sense-experience and so are continuous with presentations. Universals are not fictions, but they have the same existential status as sense-data.

But the ideas in terms of which we possess knowledge about the physical world are understood propositions. Knowledge has its internal structure as well as its reference. Data of awareness are the servants of propositional knowledge about things.

[1] It selects largely through its control of behaviour.

III.—MR. JOACHIM'S COHERENCE-NOTION OF TRUTH.

By A. R. Wadia.

Few books open with a greater promise of fulfilment and end with a greater expression of disappointment than Mr. Joachim's book on the Nature of Truth. He passes over the pragmatist notion of truth as "not a new theory of truth, but a denial of truth altogether," and devotes two chapters to Truth as correspondence, full of logical subtlety, vitiated unfortunately by two defects, since he formulates the correspondence-notion in a way, which would be challenged at every step by its supporters, and he criticises it from the positive standpoint of his Coherence-Notion. This suggests that he himself has worked out the Coherence-Notion in all its details and established it with a certain amount of completeness. As a matter of fact the net result of his enquiry into the nature of truth is thus expressed by him: "And since all human discursive knowledge remains thought 'about' an Other, any and every theory of the nature of truth must itself be 'about' truth as its Other; *i.e.*, the Coherence-Notion of truth *on its own admission* can never rise above the level of knowledge which at the best attains to the truth of correspondence. Assuming that the Coherence-Notion of truth is sound, no theory of truth as Coherence can itself be completely true, but is at most possessed of a truth which we may believe but have not proved, to be symptomatic of perfect truth" (pp. 174-175). This is scepticism, and Mr. Joachim may pride himself on his scepticism as an honest "confession of ignorance" (p. 180), but honesty of purpose by itself is no test of the philosophic worth of a theory. We propose to discuss some of the causes of Mr. Joachim's failure to satisfy even himself.

The main points of weakness in Mr. Joachim's arguments may be briefly summarised as follows:—

1. It is not clear as to whether he is discussing human knowledge, or the knowledge of the Absolute as it is for the Absolute.[1]

[1] It is but fair to admit that Mr. Joachim does not use the term "absolute". He prefers to speak of the Infinite Experience. In the footnote on page 83 he admits that the term experience is unsatisfactory, and

2. His identification of Truth and Reality makes at least a relatively independent epistemology impossible.

3. The real nature of Truth is adjectival, and Mr. Joachim treats it as wholly substantival.

4. Distinctions which had been validly made by Mr. Joachim himself in his criticism of the correspondence-notion are unjustifiably negatived by him when he comes to discuss his own Coherence-Notion.

(i) It is rather unfortunate that the ambiguity latent in the word "knowledge" by itself is not explicitly cleared up by Mr. Joachim. We should be justified in understanding by it just human knowledge, but Mr. Joachim is by no means satisfied with anything less than the knowledge of the Infinite Experience. Thus in reply to the question whether his "sketch is intended as an exposition of truth as it is for human knowledge," or whether he is describing "an ideal experience, which no finite mind can ever actually gain," he definitely says:—

"This manner of formulating the question . . . involves certain assumptions. . . . But whilst refusing to commit myself to these implications, I should reply that my sketch was intended to describe the nature of truth as an ideal, as the character of an ideally complete experience" (p. 78). Further he says: "Now there can be one *and only one* such experience: or only one significant whole, the significance of which is self-contained in the sense required. For it is *absolute* self-fulfilment, *absolutely* self-contained significance, that is postulated, and nothing short of *absolute* individuality —nothing short of *the* completely whole experience—can satisfy this postulate" (p. 78). This high language carries within its bosom a corollary fatal to human knowledge, a corollary which is boldly deduced by the author, *viz.*, such an ideal of truth is absolutely beyond human experience. Such an ideal may be worth talking about, and discussing about from the standpoint of the Absolute, but what can be its worth to human beings? They are and will be as far removed from truth as ever. Knowledge and truth are identified and both have reference to the Infinite Experience. Even the barrenness of the consequences of this view from the standpoint of humanity does not at any stage of the book make Mr. Joachim question the justifiability of his initial postulate. Almost towards the end of the book he

that the phrase "the Absolute" would be the best for his purpose. But he fights shy of using this term, because it has been travestied by critics. Personally I prefer to use the term "the Absolute" and will so use it in the course of this article.

repeats again: "That the truth itself is one, and whole, and complete, and that all thinking and all experience moves within its recognition, and subject to its manifest authority; this I have never doubted" (p. 178).

And yet it is this undoubting faith that is the root-cause of Mr. Joachim's failure. We are not concerned to deny to the knowledge of the Absolute its character of a coherent and significant whole. But when it is claimed that *it alone* is true, it is time to protest, for it involves the view that human knowledge is never completely true, *i.e.*, the highest flights of human knowledge involve more or less some degree of error. If no human judgment is *wholly* true, it follows that every human judgment even at its best is only approximately true. This conclusion is consistent with Mr. Joachim's postulate, but evidently militates against common sense, for in our ordinary everyday experience we do not dream of doubting that $3^2 = 9$ or that "this tree is green". Common sense insists that these judgments are wholly true. Mr. Joachim in the interests of his postulate is concerned to show that they are not wholly true by themselves. In order to prove his point he considers two crucial cases of human judgments: the universal judgments of science and judgments of fact, especially of perception. With reference to the former he succeeds in showing that any universal judgment of science by itself is unintelligible apart from the system of the particular science to which it belongs, that *e.g.*, $3^2 = 9$ is true only within the system of the whole science of arithmetic, just as the proposition that the angles at the base of an isoceles triangle are equal are true only within the system of Euclidean Geometry. Mr. Joachim seems content with having established this, but this conclusion does not meet his case at all. If the truth of his initial postulate is to be maintained, *viz.*, that the Infinite Experience alone can be true, he has to show that $3^2 = 9$ and such judgments being human judgments can never be wholly true. What he has actually succeeded in showing is that $3^2 = 9$ is not wholly true by itself, *i.e.*, apart from its system. But then this system itself is human, and hence $3^2 = 9$, is wholly true even from the purely human standpoint.

Mr. Joachim, however, is even in greater straits when he tries to minimise the truth of judgments of fact, which include historical judgments, descriptive and classificatory judgments and judgments of perception. With reference to the first two classes he succeeds in showing that they are true not by themselves but only within their appropriate systems. Our remarks with reference to his discussion of the universal

judgments of science apply also to these historical and descriptive judgments. The judgment of perception is far more difficult to dispose of. It appears to stand by itself, completely independent of any system. It would nevertheless be easy to show—though Mr. Joachim does not care to take up this line of argument—that to be completely significant and wholly true even a judgment of perception must form part of some one system of experience. Instead of this by diverse subtle arguments he attempts to depreciate the worth of judgments of perception. Thus he says: "Hence the judgment of perception, as such and as formulated, is entitled less than most judgments to claim absolute truth. For it is the product of a comparatively low grade of experience. It does not persist as such and unaltered in the thought which has risen above the level of everyday conversation, of description of particular matter of fact, and of the practical affairs of life" (pp. 109-110). In other words, he tries to detract from the worth of such judgments by emphasising their want of persistence in an unaltered state, as if anything in order to be true must be quite persistent and unaltered. But this notion if true contradicts his description of the Infinite Experience or the Absolute as self-fulfilling and self-fulfilled. Such a self-fulfilling Experience must be a growth in time, and hence it cannot be absolutely the same even in two successive moments. If even the Infinite Experience is thus not persistent, not "a finished product, a static consummated whole of experience" (p. 83), and yet on Mr. Joachim's own postulate it can lay claim to be wholly true, why should the judgment of perception be denied to be wholly true, simply because it does not endure? Yet in a sense surely it does endure, a judgment, having been made once, cannot be annihilated. Its existence may be forgotten, but thereby it does not cease to exist as having once formed part of some individual experience.

I should conclude that Mr. Joachim's scepticism about human truth is not borne out by human experience. Aiming too high, *viz.*, at the truth and knowledge of the Absolute, he fails to account even for human truth and knowledge. One can appreciate his confession of failure. But the failure does not appear to me to be so inevitable as it does to him, for it could have been avoided either by giving up his postulate or by admitting that at least certain types of human judgment are wholly true. If we are unable ever to attain the perfection of Infinite Experience, it is hardly worth while concentrating all our energy on attaining it, for we fail to attain it and are further puzzled over the elements of even human experience.

It would be much better to cope fully with the problem of human knowledge and establish its claim to truth. Setting out to solve the problem of human truth, he early gets lost in the bewildering mazes of Infinite Experience. Starting with full confidence, he merely ends in a "confession of ignorance". Even the knowledge attainable by humanity partakes of the nature of an ideal, in the sense that no single human being can ever hope to attain perfect knowledge—the "ignorance" of Socrates and Newton has something sublime in it, yet it is an ideal which is within the compass of humanity as a whole, whereas Mr. Joachim's ideal is beyond humanity, whether individually or collectively. The knowledge of the Absolute as it is for the Absolute is open only to the Absolute. For a human being to aim at it is unjustifiable and having aimed at it to grow desperate and become sceptical even about human knowledge and human truth is like a child struggling to grasp the moon and then failing in its attempt disdaining to take hold of any food. If Mr. Joachim's Epistemology is the only epistemology possible, no wonder the man of mere common sense prefers to keep at a distance from it.

(ii) Mr. Joachim has further rendered his task still more difficult by completely identifying Truth and Reality. This is clear from passages like the following: "Truth in its essential nature is that systematic coherence which is the character of a significant whole. A significant whole is an organised individual experience, self-fulfilling and self-fulfilled" (p. 76), and further, "It is this process of self-fulfilment which is truth, and it is *this* which the theory means by 'systematic coherence'" (p. 77), and he speaks of "the concreteness of the coherence which is truth" and "the conception of truth as a living and moving whole".

Now we fully admit the enormous difficulty of defining Reality. In its simplest essence it involves *being*. Whatever is is real. In this sense evil and error are as real as goodness and truth, and an idea is as real as a stone. A judgment inasmuch as it has being, is also real. Yet it is possible to distinguish between judgment and Reality without necessarily committing ourselves to the Correspondence-Notion of Truth. For a judgment is always *about* something and that something is Reality. Every judgment as soon as it has been made becomes part of Reality, but while it is being made it is always about Reality. Knowledge is about Reality and in its totality is composed of an infinite number of cohering judgments. If the ultimate Reality is self-conscious as the Absolute, it is clear that its knowledge is identical with itself.

Hence from the standpoint of the absolute, Knowledge and Reality are one, because they coincide. The absolute knows itself. Its knowledge is complete, and its Reality is complete. This complete knowledge is the Absolute as thinking. This complete Reality is the absolute as being. For the Absolute epistemology and ontology are just one. But this identity is not possible from the standpoint of humanity, for Reality is far wider than human knowledge. Human beings come in contact with Reality through knowledge, for them every judgment is real, but every judgment is not true. Hence arises the problem of distinguishing true judgments from false judgments, and this distinction is vital to human knowledge. Hence any attempt at the identification of Truth and Knowledge with Reality ends in a total failure to account for error and falsehood, nay, what is worse, it stultifies the whole fabric of human knowledge. An instance of this we see in Mr. Joachim's book. By identifying Truth and Reality he has transcended the limits and the possibilities of human knowledge, but only at the cost of stultifying all human knowledge. From the Olympic heights of the Absolute he may preach the oneness of Reality and Knowledge, but his preaching sheds no light on the path of the poor human beings struggling to distinguish the true from the false. This is *the* problem of human epistemology, and the solution of it essentially aims at establishing a criterion of truth. Mr. Joachim, however, in the footnote on page 67 emphatically repudiates this idea: "a *criterion* of truth—*i.e.*, something other than the truth itself, by which we are to recognise truth—is not what we require. We want to know what truth in its nature is, not by what characteristics in its opposing falsehood we may infer its presence." It is this repudiation which detracts from the worth of his book as a distinct contribution to *human* epistemology.

(iii) The identification of Truth and Reality makes it clear that Mr. Joachim regards truth as being substantive in character. There is of course a sense in which it would be good English to say: "He is a true man," though it would be meaningless to say—except metaphorically—that "Mr. H. is truth". Now what exactly is meant by saying that Infinite Experience alone is truth? Is this meant literally or metaphorically? Mr. Joachim would take it literally; but it seems to me on the analogy of common language that it ought to be a metaphor. It is very important to recognise clearly that truth is an abstract noun just as much as colour or tallness, and as such it has no independent existence. Thus truth never exists by itself, it always has reference to a

judgment. In fact truth means just a true judgment, just as much as redness implies a red object and tallness a tall object. If there is no truth apart from a judgment, truth has no substantive character, it is purely adjectival. It is a concept constructed on the basis of numerous true judgments. Hence the question: what is truth? is as significant or as meaningless as the question; what is redness? There is no one truth as Mr. Joachim emphatically states, but there are as many truths as there are true judgments, and the range of these different truths is as wide as the range of corresponding judgments.

If our view be correct, *viz.*, that truth is adjectival in its nature, it follows that the question: what is truth? can only mean: what is the mark of a true judgment? *i.e.*, what is it which distinguishes a true judgment from a false one? In answer to this question we should gladly use the notion of coherence, since we fully agree with Mr. Joachim that a judgment can be recognised as true or false not by itself, but only with reference to some system. A judgment is completely, or more or less, true only in so far as it is completely, or more or less, in conformity with—*i.e.*, cohering with—the other judgments within that system. As Mr. Joachim puts it: "the degree of truth is measured by the degree of fulness of expression which the significance obtains in each case" (p. 104). Each system of judgments constitutes a relatively independent whole, but it may be interrelated with other systems of judgments, as *e.g.*, the system of Formal Logic is interrelated with the system of mathematics in Mr. Bertrand Russell's philosophy, or as the system of ethics is interrelated with the system of biology in Herbert Spencer's philosophy. Hence it is not merely that judgments within a system have to cohere, but also that the different systems have to cohere, till we have a completely rounded system of human knowledge. Mr. Joachim would of course push back this line of argument right up to the Absolute, but there are dangers of killing human knowledge involved in this method as we have pointed out already, and hence we should be perfectly content to have the system of human knowledge as the highest system, feeding and fed by particular and narrower systems of sciences, history, and other branches of human knowledge. I think even Mr. Joachim would admit that this system of human knowledge is by no means a despicable ideal to aim at. It is vast enough to absorb all the energies of human beings without their striving to attain the knowledge of the Absolute and then feeling despondent over the inevitable failure of their attempt. Thus the coherence-notion need

not be assumed from the beginning to involve just one absolute system of Truth, but as we have been trying to show it is perfectly compatible with a number of interrelated but co-ordinate systems. *E.g.*, $3^2 = 9$ is a judgment completely true because it coheres with the system of arithmetic, and is not contradicted by a judgment in any other system. So, too, the judgment: "this tree is green" is completely true, because it coheres with the other judgments in the systems of an individual consciousness and ultimately in the whole system of human knowledge. On the other hand an ethical judgment like "Pleasure is the goal of life" may be completely false or partially true according as it completely or only partially fails to cohere with the other facts of ethical life or other systems of knowledge like biology and medicine.

(iv) Even in the earlier chapters, while dealing with the Correspondence-Notion, Mr. Joachim vigorously challenges the duality which realism involves. He again and again insists that this dualism is not maintenable. Thus he says: "This severance of the experienced Real from the experiencing of it, is the very mistake, against which the main discussions of our second chapter were directed; whilst, if truth be thus located in a sphere of being apart from mind, it is difficult to see how science can in any sense be true" (p. 69). After such an explicit statement it almost comes as a shock that Mr. Joachim in the latter half of the last chapter should morbidly talk of "the dual nature of human experience," and that this duality has not been overcome by the Coherence-Notion, and hence that some sort of correspondence is inevitable! One is tempted *mutatis mutandis* to echo the words of Matthew Arnold in his essay on Shelley: that Prof. Dowden is like Providence, in that "the ways of both are inscrutable". What Mr. Joachim refutes in one place he himself brings up in another place as an insuperable objection. Such a morbid inconsistency renders the task of studying his views extremely difficult. The subject experiencing and the object experienced are not two hostile entities, they are essentially distinguishable elements within one system, hence their duality is not at all fundamental. Ontologically speaking the whole universe is a system. The absolute is the ultimate concept of Idealism, to which the logic of facts is irresistibly driven. While realism starts with plurality and ends in pluralism, idealism starts with the manifold of experience and ends in monism. As an idealist Mr. Joachim is bound to emphasise the living unity of what he calls Infinite Experience. He does so emphasise it, but the worth of his emphasis is destroyed by his regarding the duality of human

experience as ultimate, and, as such, a fatal flaw in the Coherence-Notion, which he cannot overcome.

A similar sense of oppressive difficulty pervades his discussion of error. But its epistemological difficulty is grossly exaggerated. Error is relative to truth—just as much as evil is relative to good—and is neither more nor less difficult than the problem of truth. The real difficulty of error is ontological or metaphysical, and from this standpoint it becomes a part of the larger problem of evil. With the solution of this problem epistemology is not as such concerned, and Mr. Joachim is acutely conscious of the difficulty merely because of his initial error in identifying knowledge and Reality and thus merging Epistemology into Ontology.

A. R. WADIA.

IV.—AN AMBIGUITY AND MISCONCEPTION IN PLATO'S IDEA OF MORALITY IN THE *REPUBLIC*.

By P. Leon.

The *Republic* of Plato is confessedly an enquiry into the nature of δικαιοσύνη or morality. It is that purpose which gives unity to the wonderful variety and multiplicity of the topics discussed in the book. The metaphysical, psychological, and logical investigations, the exposition of an ideal state, the discussion on the requisites of education, the advocacy of feminism and communism, the criticism of art, important as they are, and although they bulk large in the book, are all subsidiary to this enquiry, and each is introduced by Socrates reluctantly, with apologies and with a careful explanation of their relevance.

Yet if regarded as such an enquiry the *Republic* is disappointing; the answer to the question with which the book begins seems futile, and we feel inclined to say "parturiunt montes, nascitur ridiculus mus". The result is that we are apt to remember the book more for its side issues and parerga than for what it pretends to be. We go for our Ethics to Aristotle, and practically forget that the *Republic* also has a claim to the title Ethica.

The reason for this, is, I think, that there is throughout the ethical part of the *Republic*, present latently and implicitly at least, a fundamental misconception of the nature of morality. That misconception does not, it is true, constitute the whole of Plato's ideas about morality, but it is a sufficiently large part of them to be the cause of all the fallacies of his ethical arguments. Along with that misconception goes the more common-sense and correct view of morality, and Plato uses a kind of double language which may be taken to describe the latter view only but also suggests the former.

It is therefore inevitable that in trying to make explicit the misconception, we should emphasise certain aspects more than he does and demand of expressions which he perhaps uses with popular looseness, that they should do the service of precise language. It is therefore fair to say that it would

be a misrepresentation of the *Republic*, if we did not remember that this error was only one side of the whole contention of the *Republic*.

The misconception may perhaps, without too much injustice to pagans, be characterised as the heathen view of morality. It is, of course, present in modern times also, particularly in the thinking of Nietzsche, of the self-realisation moralists, and of those who identify morality with the pursuit of right values. It has been attributed to the Germans with their ideal of "Kultur". It is the idea that morality consists in the aspiration after "higher things," the idea that the good man is "a good man" in the sense of the Oxford use of the term, a use which by no means implies the possession of moral excellences. The essence of morality is supposed to be the full and harmonious development of all the faculties of a man, especially his intellectual faculties, the living of a life of well-adjusted interests, which will exercise each of these without sacrificing or dwarfing the others. All have a claim to be satisfied though not all an equal claim. There are higher and lower faculties, and therefore the claims are proportionate. The good life is therefore *par excellence* that which satisfies more completely the higher faculties, *i.e.*, it is made up of intellectual pursuits: philosophic, scientific, and artistic interests.

It does not need much elaboration to prove that this is an entirely false idea of the nature of morality. A man may be a very superior person in the sense that all his faculties are fully developed and yet be a thorough blackguard. Nero was a man of some artistic ambitions and yet not a model emperor, citizen, son, or husband, and no doubt many other cases could be cited of people less sensual and more devoted in their pursuit of "higher things" than he, who nevertheless are morally bad.

It might be objected that here we have omitted the development of the moral faculty. But it does not seem right to speak of a moral faculty as something co-ordinate and competing with the rest, and like them capable of being the source of special interests. Morality or character pervades the whole man and all his pursuits and transfuses and gives them value. According as he is moral or not his pursuits have moral value or not, and it is doubtful whether if he is moral they are not all alike valuable without a hierarchy of higher and lower values. On the other hand, if he is not moral, whatever his pursuits are they are equally valueless morally. He may be an intellectual or artistic person or he may be a coarse sensualist. But if he is not moral he is bad

in both cases. Similarly intellectual or artistic pursuits do not make in themselves a man good, neither on the other hand do sensual propensities or even their indulgence if it involves no moral wrong, constitute his badness.

But perhaps this will become clearer in treating of Plato himself.

Plato divides the soul into three *μέρη*: *τὸ ἐπιθυμητικόν*, *τὸ θυμοειδές*, and *τὸ λογιστικόν*. The first is that which is the source of the appetites for bodily pleasures and may be called the appetitive principle. *τὸ θυμοειδές* is the source of *θυμός* or spirit, it is the principle of self-assertiveness and acturience. The most important is *τὸ λογιστικόν*, sometimes called *τὸ φιλόσοφον*. The latter is: (*a*) the theoretic intellect: it is that *ᾧ μανθάνει ἄνθρωπος* (581). Its pleasures is that of contemplating truth. It is that which makes the philosopher the seeker after *εἴδη*; (*b*) the practical intellect or the moral conscience. It is that which makes the rulers *φρόνιμοι* and makes them see that their highest good is their duty, their good is the same as that of the city (413); residing in the rulers it leads the city into the path of virtue (428); it regulates the appetites and the desires of *τὸ θυμοειδές* (431), (439-440); it is that which discerns the better and the worse, *τὸ ἀναλογισάμενον περὶ τοῦ βελτίονός τε καὶ χείρονος*. Its right work is to rule the soul. It is wise and has foresight on behalf of the whole soul. It announces to the *θυμός* what is *δεινόν* and what is not, having knowledge in itself of what is to the interest of each and to the whole which is common to the three (442). Aristotle distinguishes this as *φρόνησις*.

These three elements perform a double function: (*a*) they are present to a certain extent in every action of the human being. (*β*) According as each predominates it forms a special character with special tastes, interests, pursuits. Thus if a man has *τὸ ἐπιθυμητικόν* predominantly, he will lead the apolaustic or sensuous life seeking money and the pleasures it can provide. The *δημιουργοί* are such men. If *τὸ θυμοειδές* prevails he will be a man of action and ambition. He will strive for authority. Such men are the *φύλακες*, *ἐπικουροί* or military class. If he has *τὸ λογιστικόν* stronger than the others, his tastes will be intellectual and he will at his best be the philosopher, the seeker after the *εἴδη* and truth.

It is important to notice that in this second function, *τὸ λογιστικόν* can only be taken in sense (*a*). It is the theoretic intellect or that which makes a man "intellectual". If it is specially developed in us we have intellectual tastes, and devote ourselves to art, science, philosophy. It cannot mean (*b*) the practical intellect or the moral conscience. That cannot be

the source of special interests or make us efficient in special professions. By a sage, saint, or man of common sense we do not mean a man who has special hobbies or even special talents unless we are to call the conscience a talent. We mean a man who directs himself in a special way, whatever his sphere of life, profession or occupation may be and whatever talents he is gifted with. It is by failing to distinguish clearly these two senses of *τὸ λογιστικόν* that Plato introduces all the confusion there is in his account of morality, and it is the necessity of taking *τὸ λογιστικόν* in the sense of the theoretic intelligence, in order to make Plato's definition of the virtues intelligible, that makes it justifiable to maintain that at the back of Plato's mind there was present the "heathen" conception of morality.

The definition of the virtues is based on the above division of the soul. We need only consider that given of *δικαιοσύνη*. For (1) those given for the rest are practically the same as it; (2) *δικαιοσύνη* really means not so much justice as morality. Hence (1) only one definition is offered to cover all *κακία* being the opposite of that given for *δικαιοσύνη* so that the definition of the latter ought to cover all *ἀρετή*. (2) The things given as what the *δίκαιος* will not do are very diverse, and are in fact the thou-shalt-nots of all morality as such. It would seem therefore that the *δίκαιος* is the moral man and not one who has a particular virtue only. (3) *δικαιοσύνη* is said to be that which enables all the other virtues to come into being. Therefore if you have it you have all the rest, and, as it is implied that it is the only cause, if you have them, or any of them, you have it.

There is justice in the soul when each of its parts *τὸ ἑαυτοῦ πράττει* and does not interfere with the others, *οὐ πολυπραγμονεῖ*. *τὸ λογιστικόν* rules over *τὸ θυμοειδές* and with its help over *τὸ ἐπιθυμητικόν*. *τὸ θυμοειδές* always carries out its commands. The just man will refrain from cheating, sacrilege, robbery, treachery, unfaithfulness, adultery, neglect of parents, and of the worship of the gods, all because each part in him does its own work concerning ruling and being ruled. *δικαιοσύνη* is a *ἁρμονία* and *συμφωνία* in the soul.

What is the value of this definition? (i) If *τὸ λογιστικόν* is taken to mean the practical reason or the moral conscience, then the definition will hardly stand. When a man goes wrong it is not the case that one element of the soul usurps the function of another. Strictly speaking, it can never do that. The function of *τὸ ἐπιθυμητικόν* can only be *ἐπιθυμεῖν*, of *τὸ λογιστικόν*, *λογίζεσθαι* and one cannot do what the other does. Otherwise we have no longer portions of the

soul, but each portion is the whole man, and it is true that Plato does tend to look upon these *μέρη* as each the complete soul, each, that is to say, is made to think, desire, and act.

By saying that *τὸ ἐπιθυμητικὸν* prevails over *τὸ θυμοειδές*, presumably Plato might mean that a man is too appetitive at the expense of *τὸ θυμοειδές* and *τὸ λογιστικόν*. But a man may be appetitive and self-assertive (if that is what *θυμοειδής* means) in the right proportion and be bad. He can indulge his appetites and be sufficiently active or self-assertive, but that will not make him good.

But the chief objection to the definition is that *τὸ λογιστικόν* in the sense of practical reason can never be deposed. What regulates the conduct of the bad man even, must be called practical reason since only it can judge and direct, whether it does this rightly or wrongly. The wrong performance of a function is still performing that function and not another. It is not true then that in the case of the bad man the function of *τὸ λογιστικόν* is usurped by anything else but simply that it does not see aright. What is evil to other men is to the bad man good. What Plato must mean then by saying that *τὸ λογιστικὸν* must perform its own function is that it must see aright. But in that case the definition of virtue comes to saying that to be virtuous you must always do what is right, or be virtuous, which is a tautology and not a definition.

There is then no sense in speaking of the soul elements as transgressing their right place in the doing of immoral acts, nor in saying that in moral acts they keep their right place.

If *τὸ λογιστικόν* is the moral conscience it is nonsense to speak of keeping a balance between the exercise of our conscience and the exercise of the other faculties. This would imply that you could exercise your conscience too much. It is saying that you must keep a balance between doing what is right and doing other things, as if right and wrong doing were not a character of all doing but something to be contrasted with other doing.

(ii) But it is plain from the whole book that Plato cannot here mean the practical reason or moral conscience by *τὸ λογιστικόν*. He is thinking of the parts of the soul as the sources of different tastes and interests. When one element of the soul is said to usurp the function of another or to enslave it, it means that the whole man is devoted to certain ends, interests. *τὸ ἐπιθυμητικόν* prevails when the man gives up the whole of his soul to the pursuit of money and to procuring the pleasures which will satisfy his bodily appetites. In this sense *τὸ λογιστικόν* and *τὸ θυμοειδές* are enslaved to *τὸ ἐπιθυμητικόν*, *i.e.*, they work in order to satisfy its desires.

When τὸ θυμοειδές is the usurper, it is its interests and desires that form the ends of the man's life. The man is ambitious and nothing else. He will throw overboard intellectual pursuits and intellectual pleasures with the same readiness as he will deny himself the pleasures of the flesh in order to attain distinction, power, and office. All this is made quite clear in the account of bad characters and bad polities.

But in that case τὸ λογιστικόν cannot mean τὸ ἀναλογισάμενον περὶ τοῦ βελτίονός τε καὶ χείρονος, the practical reason or moral conscience, since that cannot be the cause of special interests. It must mean ᾧ μανθάνομεν, that δι' ὅ τις ὅλως πρὸς τὴν ἀληθείαν τέταται and its pleasures and interests are intellectual, *i.e.*, of artistic scientific or philosophical pursuits. This too, as we shall see, comes out later in Plato's language though mixed up with other meanings whereby the pleasure of ambition for example if pursued under the direction and limitation of τὸ λογιστικόν or moral conscience is called a pleasure of τὸ λογιστικόν or τὸ φιλόσοφον apparently in the same sense as the pleasure of θεωρία is a pleasure of τὸ λογιστικόν.

Plato must then be interpreted as telling us that morality consists in a harmony or balance between sensuous enjoyment, the pleasures of ambition and of an active life and those of study or theorising. The latter are to be given pre-eminence, though those of the life of the active politician cannot be neglected. The appetites, however, are to be indulged in with great moderation, and Plato is on the whole ascetic and makes the chief function of τὸ ἐπιθυμητικόν that of being suppressed and kept in check by the other two.

That at any rate would be telling us something about morality, and would not be a mere tautology. But it is the heathen view of morality as consisting in an adjustment of non-moral values. But such an adjustment, it is hardly necessary to repeat, cannot constitute morality. It may be that each part πράττει τὰ αὑτοῦ ἀρχῆς τε πέρι καὶ τοῦ ἄρχεσθαι in the sense that a man may exercise and develop properly all his faculties, become unified, bind all his interests together in a harmony, not allowing any to swamp the others, and yet he may be thoroughly unjust. He may have intellectual interests, assert himself in tyrannising over others and pursue a life of well-regulated sensual indulgence, but this will not make him just.

This view of morality, however, becomes even more prominent in the 8th and 9th books where Plato is discussing bad polities and bad characters. His tendency is to look upon deterioration of character as a gradual declension from philosophic and scientific occupation to sensual licentiousness.

In the timocratic man and timocratic state τὸ θυμοειδές rules. Intellect is despised, wise men are distrusted, education is neglected and military occupations are supreme, and the greatest honour is paid to them. The timocratic man is ἄμουσος, φίλαρχος and φιλότιμος.

In the obligarchic man and state τὸ φιλοχρήματον is enthroned. The ideal is the worship of Mammon.

The democratic man satisfies all his desires in rotation. He is a man of very diverse interests, but makes no distinction of value between them.

The tyrannical man is enslaved to an ἔρως, one all-powerful appetite which blinds him to everything else and makes him a monomoniac possessed by an *idée fixe*.

It is fair to observe that this difference of tastes and occupations is not clearly spoken of as being badness itself but as being the cause of badness. But (1) the causal relation even, is neither obvious nor necessary. A man may devote himself to the accumulation of wealth only, but do so honestly. He may hold the pleasures of the body to be the best as compared with those of ambition or of intellectual work, and yet not sacrifice morality to them. Certainly very many excellent people hold the pleasures of the intellect in very low esteem, but they are none the worse morally for that. Nor is it clear why the democratic man should be placed so low in the scale. He answers to the ideal of an all-round man, who morally may be good or may be bad. There is certainly no direct connexion between being an all-round man and being morally bad. Plato's objection that he keeps no τάξις between his pleasures will not stand. He keeps the only τάξις that is possible, *i.e.*, he indulges them in turn, taking care not to indulge any to such an extent that it will make him unfit to enjoy the rest. As Plato says, at one time he philosophises, at another he gets gloriously drunk. But that is the only thing he can do if he is to enjoy both pleasures, and there is nothing immoral in his conduct although, of course, both his philosophising and his drinking may be equally immoral. But the immorality would not consist in giving drinking a claim beside philosophising; it would consist in carrying out either in a way that would entail injustice or cruelty to others.

(2) The relation is not stated as a merely causal one, but it is implied, owing to the double sense of τὸ λογιστικόν, that the abandonment of intellectual occupation = the abandonment of conscience. Thus no type of bad character is given in which the intellectual interests oust all the rest, simply because if τὸ λογιστικόν = the moral conscience, it cannot

set up interests of its own which will expel the others. But since *τὸ λογιστικόν* also = the theoretic intellect it is obvious that the *δεινὸς ἔρως* which makes the worst type of man, the *τυραννικὸς ἀνήρ*, may be an *ἔρως* of *τὸ λογιστικόν*. The *idée fixe* which makes a man morally blind may be a scientific or philosophic passion.

Most instructive is the discussion about the comparative value of pleasures. The question is *τίς ἥδιστος βίος;* At the end of the discussion it is decided that *ὁ ἀγαθός τε καὶ δίκαιος νικᾷ τὸν κακόν τε καὶ ἄδικον* (581 ff.). But the palm of supremacy throughout the discussion is really awarded to the pleasures of the theoretic intellect, after the pleasures have been divided into three kinds, each peculiar to one element of the soul. The element to which the greatest, truest, or highest pleasures are attached is *ᾧ μανθάνει ἄνθρωπος. πρὸς τὸ εἰδέναι τὴν ἀληθείαν ὅπως ἔχει, πᾶν ἀεὶ τέταται καὶ χρημάτων τε καὶ δόξης ἥκιστα τούτῳ μέλει.* It is *φιλομαθὲς καὶ φιλόσοφον. ὁ φιλόσοφος* thinks other pleasures merely *ἀναγκαῖαι.* He is always devoted to contemplating truth and his occupation is learning. He has *ἐμπειρία, φρόνησις, λόγος.* He is *μετὰ φρονήσεως μόνος ἔμπειρος.* He places the pleasures of *τὸ θυμοειδὲς* second and those of *τὸ φιλοχρήματον* last. His is the truer pleasure because it is a filling of the more real, the mind, with what is more real: *δόξα ἀληθής, ἐπιστήμη, νοῦς, πᾶσα ἀρετή* (585).

Those who indulge in spurious pleasures are *φρονήσεως καὶ ἀρετῆς ἄπειροι, εὐωχίαις δὲ καὶ τοῖς τοιούτοις ἀεὶ συνόντες* (586). Like cattle always looking downwards and stooping earthwards and towards the table, they feed and have their fodder and mating, and for greed of these things they kick and butt each other with iron hoofs and horns and kill each other through desire that cannot be satisfied, since they fill a leaking part of themselves which is not real, with what is not real.

The same occurs with the man who satisfies *τὸ θυμοειδές* through envy caused by ambition, or violence due to contentiousness, or anger due to bad temper, following after satiety of honour and victory and anger *ἄνευ λογισμοῦ τε καὶ νοῦ* (587).

But it is possible for the desires both of *τὸ φιλοκερδές* and of *τὸ φιλόνικον* to obtain what are for them the truest possible pleasures and most their own if *τῇ ἐπιστήμῃ καὶ λόγῳ ἕπονται καὶ μετὰ τούτων τὰς ἡδυνὰς διώκουσιν ἃς ἂν τὸ φρόνιμον ἐξηγῆται.*

So when the soul follows the philosophic elements and is not at strife, each part of the soul can do its own work in general and be just, and also, moreover, each can reap its own pleasures in the best and truest shape possible. But when

any of the others gains predominance its fate is not only not to gain its own pleasure but to force the others also to pursue an alien and untrue pleasure.

What is most removed from philosophy and reason is most likely to bring about such results. That is most removed from reason (λόγος) which is most removed from law and order: *αἱ ἐρωτικαί τε καὶ τυραννικαὶ ἐπιθυμίαι*. Least removed are *αἱ βασιλικαί τε καὶ κόσμιαι*.

It is obvious from the above quotation that (1) the moral life *par excellence*, *ὁ ἀγαθός τε καὶ δίκαιος βίος* is distinctly identified with the life of the *φιλόσοφος*, *i.e.*, of the scholar. So that justice is a matter of occupation, a special profession or the pursuit of "higher things". It would therefore seem that doing anything else but philosophising can be only secondarily just. *τὸ λογιστικόν* clearly means *τὸ φιλομαθές* the theoretic intellect.

(2) But the other sense of *τὸ λογιστικόν* reappears when it is said that the other elements may get their truest and proper pleasures if they pursue those indicated by *τὸ φρόνιμον* which here must mean moral insight, and it is that which must rule supreme in the just life and not the scholar's tastes. Hence we have distinctly the ambiguity of the definition of justice as the proper hierarchy of the elements of the soul which means (*a*) the intellect has authority, *i.e.*, intellectual pursuits are to predominate; (*b*) the authority is to be that of the moral conscience which cannot have particular tastes.

(3) The bad life for Plato is the sensual or ambitious life, a life directed to the satisfaction of the appetites or of ambition. This he implies, although what he says is that the morally bad life is a consequence of this wrong orientation: in the one case *διὰ πλεονεξίαν τῶν εὐωχιῶν*, *etc.*, in the other *ἢ φθόνῳ διὰ φιλοτιμίαν ἢ βίᾳ διὰ φιλονικίαν*. According to Plato either is obvious: *τὸ ἐπθυμητικόν* and *τὸ θυμοειδές* are satisfied by men *φρονήσεως καὶ ἀρετῆς ἄπειροι* and *ἄνευ λογισμοῦ τε καὶ νοῦ*. By this he means partly that these men are not intellectual. If it were objected that although they lead non-intellectual lives they can be moral he would take refuge in the other sense of *τὸ λογιστικόν* = moral conscience and say they as acting wrongly are doing what *τὸ λογιστικόν* would condemn. But if this ambiguity be removed it must be repeated again.

(*a*) The difference between the just and unjust life cannot consist in the difference of non-moral values. The content of the unjust life may be highly intellectual pursuits; yet the desire of the *φιλόσοφος* may become a *τυραννικὸς ἔρως*. It is possible to pursue the pleasures of *τὸ φιλόσοφον*, *ἄνευ λογισμοῦ*,

τε καὶ νοῦ, *i.e.*, without righteousness, just like those of the other elements of the soul. In satisfying τὸ λογιστικόν in one sense, *i.e.*, that of the theoretic intellect, we may be leaving it unsatisfied in another, *i.e.*, that of the moral conscience.

(β) It seems more plausible to maintain that the difference between non-moral values may make the pursuit of some of them rather than of others, to be the cause of the unjust and just life respectively. It may be urged that the other desires if very strong may lead us astray and make us morally blind, while the desire to know cannot make us do anything wrong. But we can object that as potential causes of wickedness the desires of all the elements of the soul stand on the same level, for:—

(1) Either the desire to know, as such will only make us learn or contemplate and will lead us to do nothing else at all, morally either bad or good. In that case we shall be not moral but simply non-moral.

(2) Or if it is a spring of other than intellectual activity it may lead us astray and make us morally blind just as any other desire when strong upon us. It may obviously be the cause of sins of omission if not of those of commission. For it may be our duty to do other things beside philosophise, *e.g.*, to take part in politics and love of philosophy can keep us from doing our duty. This Plato himself indirectly admits when he says that the philosophers may have to be compelled to descend again into the cave.

All this is, of course, due to Plato's failure to make the distinction which Aristotle made between φρόνησις and σοφία. Hence it is that for Plato, apparently the moral question is "shall I be intellectual, ambitious, or a miser"? and the moral conflict is always between the desires for study, honour, and money, and the desires of the intellect are never those, which in the struggle are to be overcome. For they are τοῦ φρονίμου and τοῦ λογιστικοῦ and they can never be ἄνευ λογισμοῦ τε καὶ νοῦ.

It is this fallacy which pervades Plato's argument, whereby he seeks to connect virtue with the knowledge of ideas. Morality depends upon knowledge, not practical knowledge, but philosophical or metaphysical knowledge.

There is, of course, much to say for the view that an all-round development of the faculties is essential for the perfect man. But it is false to identify this with morality. So that on the other hand there is something to be said for the view, that all talents, capacities, or powers are ἀδιάφορα. They are merely ἀναγκαῖα which may be used *ad majorem Dei gloriam*,

but on the other hand may all also be used in the service of the devil. It is difficult to say in what sense any of them is higher than others.

But certainly not in a moral sense. For except in the good man they are all bad. It is but a poor moral palliation of a bad man to say that after all his wickedness is due to his love of power rather than his love of bodily pleasure.

On the other hand, when they are present in the good man they are all equally legitimate and necessary and equally high. They fit into a unity as the parts of a perfect work of art do, of which we cannot properly say that any is more indispensable than another to the character of the whole, and which, when taken apart from the whole work of art are all equally inartistic.

So when we talk of these pleasures and pursuits in abstraction apart from their being in the good man, whatever we may mean by calling one higher than another, the classification or comparison is not moral.

The idea that morality consists in the pursuit of certain non-moral values is a caste view of ethics. It lies behind all caste distinctions, of nation and of class, and whatever the basis of division is, birth, land-owning, military occupation, wealth, intellect. The basis is different in different ages and places. But in all, the qualities and talents required in a certain sphere of life are regarded as making a human being *par excellence*, and those who do not possess them are looked upon as only secondarily human. Plato is distinctly a caste-lover, an advocate of the aristocracy of intellect. Hence the prominent place of the caste system in his view of the ideal polity. True virtue, however, is the most democratic of all things, and that fact is the basis of all democratic theories. Through it we can say "a man's a man for a' that," and abolish all distinctions and degrees whether of wealth, bodily prowess, or even intellect. We regard a human being as an end in himself endowed with some value because capable of moral virtue, and on this ground we object to slavery. To the ancients, however, ἀρετή meant efficiency, talent, or genius, of which some men are capable only to a very small extent. From that sense, ἀρετή in the sense of moral excellence was not clearly distinguished. Hence Aristotle could justify slavery. It is that confusion which is still present in the *Republic*.

V.—SENSE-KNOWLEDGE (II.).

By Professor James Ward.

Perceptual Relations.

§ 5. The exposition of demonstrative propositions introduced us, it will be remembered, to the distinction of 'this and that' as involving also the distinctions of 'here and there' or —it may be—'now and then'. We here find ourselves brought up against a new kind of logic recognising terms and propositions of which the old logic took no account, *viz.*, the logic commonly called 'the logic of relatives'. Relation is perhaps the widest of all the categories with which epistemology has to deal: so Locke asserted that all things are capable of relation, and Schelling even held relation to be 'the only primary category'. At any rate it includes many special relations of very diverse kinds. Yet in one respect all relations are alike: they all rest upon a *fundamentum relationis*, which—as Locke said—implies always [at least] 'two things or ideas,' either in themselves really separate, or considered as 'distinct'. Now 'these two things or ideas' can always be indicated as 'this and that': the simplest relations, then, will fall within the domain of sense-knowledge, be concerned, that is to say, with sense-data indicated in this way. We must now, first of all, make clear how such perceptual relations are possible, and then try to ascertain what they are, and what in themselves they directly imply.

As to the first point—we have already seen that sense-data are not isolated items but are changes in a presentational continuum.[1] But change of presentation is by no means to be identified with the presentation of change. It is indeed a long step from the presentation of the one, which is but a particular sense-datum, to the other, which is a general concept: in the language of Locke, the knowledge of the one presupposes sensation merely, the knowledge of the other presupposes 'reflection'. But when we know what change means we can understand too that, to repeat our former reference to Kant,[2] despite the superficial paradox, all change

[1] *Cf.* I., § 3, p. 269. [2] *Cf.* I., § 2, p. 265.

implies something that persists. This something, as we have said, is here the presentational or objective continuum, which persists by continuously changing. Kant in the same passage has drawn a useful distinction between change (*Veränderung*) and alteration or rather alternation (*Wechsel*). An event may be said to begin and end, but is not, in itself, a change. So regarded, sense-data do but alternate one with another: this one comes, that one goes. They are changes, or more exactly, partial changes only as occurring within the objective continuum of the subject to whose experience they belong. Herein alone lies the possibility of any this and that being distinguished; and till they are distinguished any knowledge of further relations, subsisting between them or founded upon them, is out of the question.

As to the various perceptual relations themselves—the two most fundamental are the two already involved in the distinction of this and that itself, and they are for epistemology perhaps the most important, the spatial and temporal relations, that is to say, implicit in here and there, now and then, *i.e.*, in the old Aristotelian categories, Where and When. As these are topics that must occupy us at some length, it will be convenient to consider first certain other perceptual relations less complex and calling for less discussion.

We may begin with perceptual processes that implicate *comparison*, and in tracing their gradual development observe how they lead on to the intellectual processes in which comparison is explicit. So we may hope in this case to establish the continuity between sense-knowledge and thought-knowledge that Kant allowed might exist but could not find. To recognise this as red, that as green, *implies* the statement "this is different from that"; but it clearly does not imply any such actual comparison as the *assertion* of difference would do. It is also obvious that one could not apprehend both red and green, if they were not, in fact, different. But there was a time for the psychological individual—if not for any concrete individual who can now perceive them[1]—when red and green were not distinguished. All such differentiation of sense-data, psychologically regarded, is a gradual process due, as already said,[2] to subjective interest or selection: though an objective process, it is one that is subjectively determined. This progressive differentiation or increasing diversity of advancing experience fully

[1] But what is here said of the psychological individual has its counterpart in the experience of the concrete individual also. *Cf. Psychological Principles* (on the *primum cognitum*), pp. 200 f.

[2] I., § 1, p. 262; *cf. Psychological Principles*, p. 415.

accounts for what Lotze called 'the primary universal'—the epistemological significance of which he was perhaps the first to see. The point is that the primitive sensations of sight, sound, etc., are related to their subsequent differentiations not as what is general is related to what is special, as in the case when we merely logically subordinate a lower class to a higher: they are really related as branches are to the trunk from which they spring, or as species are really related to the genus from which they originate. The primitive generality, in short, is not a logical universal: for it is not a *result* of abstraction but a *basis* for further determination. It preceded, and it persists in, the differentiations that emerge later as its specialisations.[1]

The continuity of developing experience, then, entails this emergence of perceptual relations in which comparisons are only implicit, are, at any rate, not explicit as those are which result later when deliberate intellection is evoked.[2] But the significant fact here is that the comparisons in both cases are the result of subjective selection. Every creature develops most the senses that best subserve its self-preservation: these for it become its higher or intellectual senses: hence the dog has a smell-brain and man a sight-brain. The *beginning* of the transition from the comparison implicit in the differentiations of the primary universal of perception to the comparison that becomes explicit when universal concepts of relations are available—this beginning, we may see exemplified at every turn in the behaviour of the higher animals, when they learn by 'bitter experience to look before they leap'. A fox who has once escaped from a trap will not be caught again, if the same sort of snare is used; recognising the resemblance between the old situation and the new he will refrain from touching even a more tempting bait.[3] But there is no need to enlarge further on this point here. The continuity between perceptual experiences and conceptual—despite the many missing links—is, as regards comparison, after all hardly questionable; and if so, then too it can hardly be denied that the later are impossible without the earlier, which though insufficient seem at least to be indispensable.[4]

[1] *Cf.* Lotze, *Logik*, 1874, §§ 14, 15; *Psychological Principles*, pp. 328 ff.

[2] They might perhaps be called 'tied relations' on the analogy of 'tied ideas'. As to the latter *cf. Psychological Principles*, pp. 184 ff.

[3] *Cf. Psychological Principles*, p. 187.

[4] It is probable that Hume had these perceptual relations in view when he too hastily concluded that all relations involve resemblance and that difference—meaning disparity—is not a relation (*Treatise*, Green and Grose's, ed. i., pp. 322 f.). It is certainly true, as I have said elsewhere, "that, (1) if we had only a plurality of presentations absolutely different

Experiences such as those just described bring us naturally to another class of relations, which—though distinctly recognised as such, only at the thought level—nevertheless affect behaviour at earlier stages, relations of *contrariety or incompatibility*, that is to say. Any sportsman who has ever tried to entice water-fowl within gunshot by trailing strings of dummy decoys behind his boat and imitating, as best he could, the calls of real birds, knows how seldom these wiles succeed. Long before an unsuspecting flight gets within the danger zone the fraud is discovered, and off they wheel. It is as if they said: "Here are the forms but none of the movements of living things. One of us might utter cries something like those, but he would not be invisible some twenty yards away from the rest, all of whom were mute. The whole affair is uncanny." So we might attempt to interpret in human language their perception of incompatibility; for, as Trendelenburg has happily said, "what we call contradiction is the *expression* of the altogether incompatible, that of itself mocks at all mediation".[1]

But the contradiction implied in the scene we have just attempted to describe is one involving statements which refer to a single concrete situation. The contradiction, however, with which logic deals, is, of course, not restricted to, nor indeed mainly concerned with, such concrete cases. Logical contradiction, too, it is important to notice, is a more complex relation than the relation of comparison with which we have already dealt; and this complexity involves further differences which are not without their difficulties for our present inquiry. In comparison we have a relation subsisting between two *terms*, eventually two sense-data, both of which are found to be either like or different. Hence this relation is described as symmetrical. In contradiction the relation involved is between two *propositions*; and what characterises the one is called the logical opposite of what characterises the other. Oppositeness, too, implies difference, but not a difference applicable to its *relata* in the same sense. So far the relation here is a symmetrical, or as some would prefer to say, there are two relations.[2] Further likeness and difference are in the

we should have no continued consciousness at all; and (2) that we never compare—although we distinguish—presentations that seem absolutely disparate, as *e.g.*, a thunderclap and the shape of a brick" (*Psychological Principles*, p. 330). Thus Hume's statements at least bear out our contention that Lotze's first universal is the root from which all perceptual comparison springs.

[1] *Logische Untersuchungen*, 2nd ed., 1862, ii., p. 152 *fin.*

[2] *Cf.* London is E. of Bristol, implying Bristol is W. of London.

end indefinable: to know what they mean we must perceive what they are. But if we ask for the meaning of contradiction, a satisfactory definition is thought to be possible, *e.g.*, that two propositions, such that what the one asserts the other denies, and *vice versa*, are contradictory. Moreover, the familiar 'contradictory opposition' of logic involves a universal proposition referring not to one thing but to a class of things, while the 'contrary opposition' of logic—even though it ceases to be formal when one thing is in question—is still distinct from the real contrariety or incompatibility of perception, where not only the thing but the time and the place are the same. Altogether, then, it may seem that we cannot connect logical opposition with perceptual incompatibility. For circumstances of time and place do not fall within the domain of logic, it is said; and so the sharp line dividing thought, with which logic is concerned, from perception as concerned with things, thus becomes manifest. To talk of a sharp line here is, however, just to beg the question, not to face it.

Is, then, Trendelenburg's statement faulty? Not if we understand him as meaning that perceptual experiences of incompatibility are the presupposition, of which contradictory propositions are the explicit 'expression'. Anyhow this seems to be the fact, and—though generally overlooked—this fact has not lacked recognition altogether. Least of all was this the case with Aristotle, on whom the so-called *logical* principle of contradiction is usually fathered. But the principle on which Aristotle insisted was an *ontological* one, *viz.*, that "the same attributes cannot at the same time and in the same respect belong and not belong to the self-same thing".[1] This principle 'the most certain of all' was, he held, a 'presupposition' of what afterwards came to be called 'logic'.[2] Meinong, who has given us a careful study of this important relation, concludes by saying: "There remains, then, nothing else to be done except to take the evidence for judgments of incompatibility as an ultimate fact (*Thatsache*)".[3] It is this fact, 'mocking at all mediation,' with which experience at the perceptual level may confront us, and that experience at the conceptual level formulates and generalises as 'what we call contradiction'. J. S. Mill bears testimony to the same fact. "That blue is not green," he has said, "involves no contradiction." We could believe that a blue

[1] *Metaphysica*, IV., iii., Bekker, p. 1005b.
[2] *Cf.* Prantl, *Geschichte der Logik*, i., 1855, pp. 131 ff.
[3] *Hume-Studien*, II., 1882, p. 114; *Gesammelte Abhandlungen*, ii., 1913, p. 109.

thing may be green, as easily as we believe that a round thing may be blue, if experience did not teach us the incompatibility of the former and the compatibility of the latter.[1]

But from this reference to experience and to facts it would be a mistake to conclude that the perceptual knowledge of relations as such is itself purely empirical and *a posteriori*. To do so would be to confuse sense-data, which are the *relata*, with that object of a higher order, the *relatio*, which is founded upon them. A relation is never itself a sense-datum, though it always ultimately presupposes sense-data: to miss this point is to ignore the difference between a complete proposition and the terms it necessarily implies. The only pertinent question is whether such a proposition as, say, red is different from green—or, better and more generally, this is different from that—is independent of all other experiences beyond what is directly given in the *comparata* themselves; in other words, whether these furnish all the evidence that such a judgment requires. If they do, such a judgment is as much entitled to be called immediate and *a priori*, *i.e.*, non-empirical, as any judgment whatever. It would, therefore, be needless and even meaningless to wait for further evidence, either inductive or deductive. And assuredly—provided the data themselves are definite—one would as little think of seeking other instances of red and green, before pronouncing this red and that green to be different, as one would of waiting for a second instance of $2 + 2$ before pronouncing its sum to be 4.[2] It may well seem rash to place two such instances on a par: to do so is to invite an objection that may seem serious; for are not mathematical propositions necessary or apodeictic, whereas propositions concerning sense-data can never be more than assertory. What warrant then have we for calling them *a priori* or non-empirical? "Necessity and strict universality," Kant said, "are sure signs of an *a priori* knowledge; they also belong inseparably to each other . . . and each by itself is infallible." Accordingly, he felt at liberty to appeal now to one, now to the other, as convenience suggested.[3] And he was clearly free to do so, for strict universality is inexplicable unless we presuppose objective necessity, and this being

[1] *Examination of Sir W. Hamilton's Philosophy*, 3rd ed., 1876, p. 470.

[2] It is true that some persons fail to perceive that a given this and that differ in respect of a certain quality, though their difference is manifest to others; it is also true that there is no such uncertainty in the case of $2 + 2$. But such variations in sensory differentiation are irrelevant here. When the sense-data are definite the judgment in the former case is, if anything, the more immediate and certain of the two.

[3] *Critique*, B., p. 4.

present, that can follow. For us, then, it may suffice here to consider only the former. By objective necessity—or, better, objective necessitation—we mean that determination by the data immediately given, which compels our assent by its self-evidence and leads us to speak of the knowledge that it affords as objectively necessary or *a priori*. In this respect we find the two instances on a par.[1]

But there are some who seem to think that a perceptual judgment—like all judgments—presupposes the so-called 'laws of thought'. It doubtless presupposes sundry things, but presuppositions are not necessarily grounds. Such a judgment, for example, presupposes the experient who makes it; but it is evident, not because he makes it: he makes it, because it is evident. If he judges at all, he *must* judge as he does on the ground of the sense-data before him; and beyond these he need not go, and at the perceptual level cannot go.[2] Since sense-knowledge is possible without thought-knowledge and invariably precedes it in order of time, it seems pointless to say that thought-knowledge is the *logical* presupposition of all knowledge, true though it is. The thinkers to whom I refer should, and usually do, go further; and maintain that thought determines things, not things thought. But whatever be the sense in which this may be true, it could hardly decide the question for the moment before us, the question, that is, as to the continuity of *knowledge*. At any rate it seems plain that we have *a priori* perceptual knowledge before we have *a priori* conceptual knowledge, and that this order cannot be inverted.[3]

Perceptual Orders: (I. Space).

§ 6. We may now return to the distinction of this and that as being fundamental to all relations. As already said, it implies the differences of order that we speak of as 'here and there,' 'now and then'—differences that we proleptically distinguish as respectively spatial and temporal.

[1] *Cf.* Sigwart, *Logik*, i., § 31, 7; and Meinong, *Ueber die Erfahrungsgrundlagen unseres Wissens*, 1906, § 1.

[2] This is the burden of Locke's famous chapter on Maxims (*cf. Essay*, IV., vii., § 4 *fin.*, §§ 8, 9, 19).

[3] But there is still a possible objection to the foregoing discussion that it may be well to notice. Terms such as different, like, incompatible, it may be said, are general and abstract: they are therefore beyond the range of any knowledge confined to the sensory level. It is true, they are; but the specific experiences for which they stand are not: these can be psychologically described (*cf. Psychological Principles*, pp. 87, 331 f.) We can, with care, although it is not always easy, use language to describe sense-knowledge without being guilty of the so-called 'psychologist's fallacy'. *Cf.* I., p. 257.

In the spatial order 'here' for us is absolute, as 'now' is for the temporal order. Again, 'there' is continuous with 'here,' since both fall within the extensity of the primary or presentational continuum. In the temporal order, in like manner, 'now' and 'then' both pertain to the secondary or representational continuum we call 'the memory-thread'. The gradual differentiation of these continua into what are termed—again proleptically—'local signs' and 'temporal signs' respectively, provides us with the *fundamenta relationis* for those 'objects of a higher order' which *we come at length* to recognise, such relations, that is to say, as position, distance, direction, succession, simultaneity, and many others. Only to an experience that has advanced thus far are we entitled without anticipation to attribute any perception of space and time. But so long as any one of those relations is merely perceived it is confined entirely to the particular sense-data concerned and lacks any immediate implication of 'pure' space and time as 'the infinite wholes' which Kant conceived to be 'given' *a priori*, and of which all spatial (and temporal) relations were but so many limitations. At this point we may interpolate a remark:—There are few distinctions more frequently overlooked than that between the exposition and the acquisition of knowledge, emphasised, though it was so long ago, by Aristotle. Now, however 'logically' *a priori* pure, empty, homogeneous space and time may be for the former, the *ordo ad universum*, they are certainly not chronologically *a priori* for experience, the *ordo ad nos*—in other words, they are not 'given'. From the standpoint of experience, so far from Kant's pure forms of intuition being the *sine qua non* of our perceptual knowledges of spatial and temporal relations, it would appear that these are the indispensable presupposition of them. The empty space and time of thought-knowledge seem, in fact, to be the emptied space and time of sense-knowledge, whatever they may be beside. Kant was right in maintaining—what after all is but a truism—that space or time, "that in which sensations are ordered cannot be itself sensation";[1] but he was too hasty in assuming that these 'forms' were independent not merely of *particular* sense-data, but of *any* sense-data whatever. A regiment is not a soldier, but it would be impossible without soldiers, impossible, too, unless soldiers were such as to be capable of being regimented. If sense-data had no characteristics except intensity and quality, how could they be formed into a spatial or temporal order? The seeming impossibility of solving this question—at least as

[1] A., p. 20; B., p. 34.

regards space[1]—would go far towards accounting for the uniform failure to explain spatial perception on the part of the psychologists who, in common with Kant, have ignored extensity as a characteristic of sense-data.

Recognising extensity, however, as itself a *quantum continuum*—and about that there seems to be no doubt—we may now briefly recall the essential factors in the genesis of spatial perception, to begin with that:[2] we shall then be in a position to discuss the connexion between spatial percepts and spatial concepts which epistemology has been wont to consider alone.

Extensity we regard as pertaining to the presentational continuum as a whole: it is involved at the very beginning of experience in what is technically known as cœnæsthesis, genreal sensibility or body-sense. The more the body as a sensitive organism is structurally diversified the more any specific sensation, that of being touched at one place, say, differs from a like touch at another. These differentiations within the originally undifferentiated, or less differentiated extensity, are 'the local signs' referred to above. The mere ubiquity of the primitive cœnæsthesis thus becomes a continuum of fixed and coexistent places, or τόποι, severally distinguishable, but devoid as yet of any recognised spatial relations. But now the more the mobility of the organism is developed the more possible it becomes actively to touch a spot that has just been passively touched. Such movements, however, regarded by themselves, imply nothing more than a continuous change which the experient is able himself to produce. The successive 'moments' of this change—the several kinæsthetic sensations, as they are technically called—we may analytically describe as 'positional signs,' since they correspond to the actual positions through which the limb is moved; but taken alone they afford no perception either of motion or of space. So taken, all the knowledge they could yield would be that of a sequence of impressions which we can produce and reverse—a temporal series comparable with that of singing up and down the musical scale. They are not coexistent, as local signs are, though like these they are not interchangeable. But whereas the former constitute a single simultaneous 'manifold' or ubiquity the

[1] As regards time, which psychologists have too much neglected, the case is even worse, as we may presently see.

[2] There is something to be said for beginning with time, since this is implicated in all experience and, therefore, in the perception of space. Still as temporal relations are not cognised till later, it seems, on the whole, best to follow the usual practice of beginning with space.

latter consist of diverse successive manifolds. Only as these positional signs are perceptually complicated with local signs do they acquire those relations to each other which we know as distance and direction; the one answering to an interval in the same positional series, the other to different positional series which we might call perceptual co-ordinates. Till then we have no explicitly spatial percepts; for only then the *topography* of the differentiated sensory continuum is supplemented by the *itinerary* of definite active movements. Thus sense-data implicating time appear to be involved in the perception of space.

From this psychological standpoint we may now prepare to discuss the connexion between spatial percepts and spatial concepts. It is not enough to say that in the former we are confronted by a filled space, which in the latter we imagine emptied. Nor is spatial perception to be put on a par with the simple perception (or recognition) say of a colour or a sound. To speak of a 'simple' or 'original' idea of space as given by sight and touch was a grievous mistake of Locke's and involved him in difficulties from which he failed to escape.[1] Space is not a sense-datum, which we can perceive as we may 'red' or 'rough': in other words, there is no spatial perception corresponding to the proposition, 'there is space'. If they could be expressed in language, single spatial percepts would yield relational rather than predicational propositions, *viz.*, such as require the use of prepositions or adverbs—above, below, before, behind, near, to the right, to the left, etc., etc. In such percepts, what is primarily 'intuited,' as Kant would say, is just a particular relation of two-sense-data; and these relations—we repeat—so far from presupposing any '*pure* intuition of space' as an infinite, homogeneous (or empty) continuum (Grösse), are themselves, it would seem, the means by which alone *any* 'intuition' of space at all is elaborated; and elaborated *pari passu* with them. The only homogeneity they presuppose is the extensity of the presentational continuum conceived as—at its lowest limits—still awaiting differentiation. This extensity we may well regard as an indispensable condition, but one insufficient by itself to explain the perception of these relations within it.

Further, these spatial relations, as perceived, are relations in a very peculiar sense. Distinctions of place and position, relations of distance and direction are neither to be resolved into, nor to be deduced from, logical relations. The failure of Leibniz to recognise this fact is the counterpart of Locke's

[1] *Cf. Essay* II., xv., § 9, and the note from the French edition of Coste usually appended by English editors.

failure to see that these 'modes of space,' as he called them, could never arise at all if space itself were a 'simple idea'. In one word, as Kant has said of them, "Leibniz intellectualised" exclusively, and "Locke sensualised" exclusively: the one ignored the difference between concept and percept, the other the difference between percept and sense-datum.[1] Kant avoided Locke's error by maintaining that space is 'a form,' not a sense-datum: he avoided Leibniz's by maintaining that space is 'a form of intuition,' not a form of thought. But he erred himself in regarding this 'form' as subsisting independently of experience and 'lying ready in the mind'. We have in this view just the old metaphor of seal and wax over again; but now it is the mind that impresses the shapeless matter of sense which it receives, instead of being itself a *tabula rasa* to be 'impressed by ideas'. But what did Kant here understand by mind (Gemüt)? Just the totality of capacities and faculties which—according to the psychology then in vogue—the experient subject has, uses and enjoys. In the present context, however, it is the capacity which he called *Sinnlichkeit* or 'receptivity' with which he is concerned. Sense-data are received into the forms of space and time: that for Kant is so far just an ultimate fact. They do not bring a form of any sort with them: how could they, any more than clay brings with it the form of the mould that receives it? And if the experient subject is here only passive or receptive, then, though the forms are his, he can have done nothing to acquire them.[2]

Anyhow, whatever its source may be and whatever else it implies, form always implies definiteness. But what title, we may ask, has that 'pure space,' in which nothing whatever is intuited, to be called a *form* of intuition? Poincaré called pure space, since it admits of many diverse forms, an '*amorphous* continuum'. And surely this is true of 'space necessarily presented as an infinite *given* magnitude'? Yet this, be it remarked, is the one positive conclusion of Kant's

[1] *Cf. Critique*, A., p. 271; B., p. 327.

[2] To talk of 'an original *acquisition*,' as Kant was driven by certain of his critics to do, is verily a *Nothbegriff*, borrowed from jurisprudence and quite meaningless here (*cf.* Kant's *Streitschrift gegen Eberhard*, entitled *Ueber eine Entdeckung, usw.*, Werke, Hartenstein's ed., vi., pp. 37 ff.). But it shows the influence of the Leibnizian doctrine of innate powers; and it shows too how utterly foreign to Kant's mind—as to 18th century thinkers generally—was the idea of a genetic development of experience; notwithstanding his description of his own philosophy as a sort of 'epigenesis of the pure reason' (B., p. 187) and his appreciative remarks on Blumenbach's biological epigenesis (*Critique of Judgment*, 81). *Cf.* Vaihenger's *Commentar*, ii., pp. 90-94.

so-called 'metaphysical exposition of the concept of space'—the rest of it consisting of proofs that space is not a concept at all. Nevertheless, Kant defines this form as "that which makes" (ed. A.) or "can make (ed. B.) that the manifold of the phenomenal (*die Erscheinung*) is arranged (geordnet) in certain relations (*Verhältnisse*)".[1] Not one word has he vouchsafed so far, *i.e.*, in the first part of his *Critique*, the so-called Transcendental Aesthetic, to show how this is possible. Well might he suggest in the *Prolegomena* that here is something which 'tief verborgen liegt,' lies deeply hidden.[2] When, however, he comes to deal with this topic in the second part of his *Critique*, in what he called the Transcendental Analytic, a wholly new concept comes to the fore, which in the Aesthetic was not even mentioned—to wit, synthesis (*Verbindung*). Here he begins by saying: "The manifold of presentations may be given in an intuition which is merely sensuous (*sinnlich*) or nothing but receptivity, and the form of this intuition may lie *a priori* in our presentative faculty, without however being anything more than the manner in which the subject is affected. But the *conjunction* (*Verbindung*) of any manifold, whatever it be, can never arise through sense: nor, therefore, can it ever be found involved in the pure form of sense-perception. . . . Among all presentations, *conjunction* is the only one that cannot be given by objects but must be set up by the subject itself as the result of its own activity."[3]

No change of front could well be more complete; no wonder, then, that at length attempts to reconcile them have as good as ceased.[4] Here we need only signalise the main divergencies. On the one side we have *a ready-made form* (a form into which sense-data are passively received) due equally with our five senses to our natural constitution (*unsere Naturbeschaffenheit*) and for aught we know other beings may in both respects be constituted differently.[5] On the other side we have *an active synthesis* essential to any experience at all and therefore common to all finite subjects alike: without this we should have no knowledge whatever.[6] Again,

[1] *Critique*, A., p. 20; B., p. 34. [2] *Prolegomena*, § 6. [3] B., p. 130.

[4] *Cf.* Prof. Norman Smith's *Commentary to Kant's Critique of the Pure Reason*, 1918, pp. 88 ff.

[5] *Cf.* Kant's latest, much-neglected summary of his philosophy, *Die Fortschritte der Metaphysik, usw.*, Hartenstein's ed., viii., pp. 527 f.

[6] On which account it should be noted, by the way, that Kant calls this general synthesis (*Synthesis überhaupt*) 'transcendental synthesis'. It ranges between the two extremes of what he sadly miscalled 'productive imagination' and the purely intellectual synthesis of the categories as merely thought. *Cf.* A., p. 120; B., pp. 103 f., pp. 165 f.

on the one hand, we are told that space is 'presented as an infinite *given* magnitude (Grösse), containing a multiplicity of presentations within it, but only as so many limitations (*Einschränkungen*) of it'.[1] On the other hand, we are told that "an extensive magnitude is one in which the presentation of the parts makes the presentation of the whole possible and therefore necessarily precedes it". "I cannot," Kant continues, "figure to myself a line, however small it be, without in thought drawing it, *i.e.*, starting from a given point and generating all the parts [of the line] one after the other."[2] In other words, first we are told that an infinite extensive magnitude is *given* and then that all extensive magnitudes are *constructed* and 'only in this way intuited'.

Here we come upon a new difficulty. The 'constructive' process to which Kant has referred is just that of active movement, real or imagined.[3] But movement (and change) he has expressly declared to be wholly empirical. As to movement he has said: "This presupposes the perception of something moving. In space, however, considered by itself, there is nothing that moves. Hence what moves must be something which is found *in space only through experience*, and is thus an empirical datum."[4] What then are we to understand by drawing a line in thought and only so generating the intuition of it? And how then could Kant, as he afterwards did, call kinematics, the general science of motion, 'synthetic knowledge *a priori*'?[5] Already, two years before the publication of his second edition, this difficulty was forced upon his notice by Schütz, an acute disciple of his, who urged that even to draw a line in thought involved movement of some sort; so that, if movement were an empirical datum, mathematical construction would cease to be purely *a priori*. In the second edition, accordingly, Kant proceeded to distinguish between the empirical movement of an *object* in space and the *a priori* movement of describing a space. The object *determines* our observation in the one case: the subject itself acts by synthesising in the other, and in this case we attend only to the action in abstraction from the space.[6] But then we have only succession, as Kant allows. It seems impossible to attach any meaning to this, unless the succession is not any succession but only the succession involved in movement. The difficulty then remains. Of the two horns of the dilemma

[1] A., p. 25; B., pp. 39 f. [2] A., pp. 162 f.; B., p. 203.

[3] It cannot be merely a case of his 'productive imagination' which he has described as a blind, though indispensable function of the soul, and one of which we are rarely conscious (A., p. 78; B., p. 103).

[4] A., p. 41; B., p. 58. [5] B., p. 49. [6] B., p. 155.

it looks as if Kant were submitting to the first and allowing motion to be *a priori* after all, as at one time he certainly inclined to do. Our perplexity is rather increased than diminished when he incidentally remarks that we can only 'make time presentable under the image of a line'.

In fact, however, the difficulty was really concealed from Kant by his hazy and wavering ideas about imagination. Having started with two distinct 'stems' or 'sources' of knowledge — sense and thought — when in the Analytic he came to treat of synthesis, he supposed it necessary to introduce imagination as a third in order to unite them. In the first edition he elaborated the doctrine of a threefold synthesis of imagination; but here, in the second edition, he has retained only the lowest, the so-called 'productive imagination'. This, however, as already said, will obviously not suffice for mathematical construction: that cannot be fully accounted for by a blind and unconscious process, an 'art hidden in the depth of the soul which nature will never surrender to our gaze'. Kant's mathematical construction is 'intellectual synthesis': to say that it is also intuitive—and in this, as already remarked, we see Kant's advance on Leibniz—is to say that it *uses* imagination. But this implies control and is therefore conscious. It also implies abstraction, as he has said, for "many determinations . . . are here entirely ignored,"[1] which the actual objects we observe involve. The accidents and defects of actual representation have to be allowed for. In other words, in mathematical construction we idealise. This distinction had already been fully recognised by Locke, though Kant failed to credit him with it.[2] Locke's archetypal ideas in mathematics are just Kant's ideal constructions: both alike are conceptual not perceptual. But here again Kant advanced inasmuch as he recognised also the dependence of mathematics on intuition; whereas Locke was so little aware of this as to make a point of placing ethics beside mathematics, as if both were apodeictic in exactly the same way. Locke, in fact, was here nearer to Leibniz than to Kant. But this only brings out Kant's carelessness in talking of drawing a line *in thought*. Euclid's postulates are not *logical* and his problems call for particular figures only to 'provide an image for a concept'. So then, when all is said and done, representation presupposes presentation, imagination presupposes perception—to talk of imagination in any other sense is but psychological

[1] A., 714; B., 742.

[2] *Cf.* Locke, *Essay* II., xxxi., § 14; IV., iv., § 6; Prof. Gibson, *Locke's Theory of Knowledge*, 1917, pp. 149, 318.

barbarism. Further, whatever is essential to the actual perception of space must enter also into its schema or conceptual image. It is the merest superficiality to stop short at the general mention of imagination. What precisely is it that we imagine in mathematical construction? We imagine lines *drawn*, circles *described*, co-ordinates *erected*, and so forth, Kant himself has said.

Movement is empirical, no doubt. But there are two sorts of movement, psychologically very distinct, the movements we voluntarily make and the movements of objects which we merely observe. Unfortunately for Kant the psychology of his day entirely overlooked 'the important *rôle* that bodily movements sustain in every stage of experience'; [1] and for his own part, he was content to take psychology as he found it. It was thus owing to 'the intellectualistic bias' of his day that he stopped short at synthesis of a manifold as a subjective factor. And further, he assumed that the manifold is in all cases alike simply given on the one hand and passively received on the other. It is not necessary at this stage to raise any of the vexed questions that ultimately cluster round the meaning of "givenness". It is enough to note that we only call a presentation *given*, when its being there is a fact for which psychology does not account. But in this respect sensations and our own movements are by no means on a par.[2] In respect of the one we do indeed speak of ourselves as 'almost passive,' as Locke put it; but not so in respect of the other: we then speak of ourselves as active.

It is only by the synthesis of what we receive and what we contribute that we attain to spatial perception. The interest of Kant's theory lies in his recognition of both these factors, that which is given—the sensory manifold[3]—and that which 'cannot be given'—the subjective activity. Naturally enough he only came upon the former in his Aesthetic dealing with receptivity, and paid no attention to the presence of the latter till, in his *Analytik*, he came to treat of the understanding as essentially informing activity. Here his recourse to imagination—as furnishing the link between the two—brought him in sight of what seems to be the truth. Had he duly pondered the difficulty raised by his own adherent, Schütz—instead of making an ingenious attempt to evade

[1] *Cf. Psychological Principles*, pp. 19 *fin.* and 20. [2] *Ibid.*, p. 50.

[3] Though even here, as we have previously seen (p. 274), he missed the essential point by taking his so-called manifold as a bare aggregate of items, implying indeed, in spite of himself, though not realising, how much more they actually are.

it—he might have seen that the geometer's ideal constructions must needs presuppose actual overt movements, movements subjectively initiated and not merely presented. In other words, he might have seen, as we have said, that "spatial relations—the 'ordering' of the sensory manifold—are relations of a very peculiar sort".[1] Of such a sort, in fact, that the pure ideational space of mathematics, which alone he had in mind throughout, cannot come first in knowledge as it is *ad nos*. Anyhow, regarding knowledge from this historical standpoint, the continuity between the perceptual and the conceptual in this case of spatial order—as in the others so far considered—seems clear.

We have still to consider temporal order and the relations which it involves, and also, as closely connected both with spatial and temporal order, sundry questions concerning number. These for the present must be deferred.

[1] *Cf.* above, p. 456.

(*To be continued.*)

VI.—DISCUSSION.

WHAT DOES BERGSON MEAN BY PURE PERCEPTION?

THE number of MIND for October, 1918, containing Mr. H. Wildon Carr's note on the above subject, has reached me in Australia after considerable delay. I have to thank Mr. Carr for trying to make some fundamental points clear, and for the considerate way in which he has handled the rather crude view put forward in my note in the number of this Journal for April, 1918. My note reads like an attack on M. Bergson; it was not written with any such purpose, but was put together about five years ago in the course of a correspondence with a friend, and was simply an attempt to clear up a doubtful point. I had not seen Mr. E. D. Fawcett's review of *Matter and Memory* (MIND, N.S., No. 82) which would have removed some of my difficulties.

Pure perception, though M. Bergson tells us that it has only a theoretical existence, plays an important part in his exposition of the relation between spirit and matter. It is the point from which his dualism starts (*Matter and Memory*, p. 295). It is in the act of pure perception that spirit can rest on matter and unite with it, yet nevertheless be radically distinct from it (*ibid.*, p. 294). It seemed worth while to isolate pure perception and try to discover what it means for M. Bergson and whether it always means the same thing.

Mr. Carr defines it as the limit of materiality, assuming, apparently, that for M. Bergson this is always the same thing. But it is sufficiently clear that in *Matter and Memory* there are two views of pure perception, an earlier view and a later view. The transition from one to the other is worked out on pp. 69-77. The earlier view is that it is an instantaneous vision, the later view is that it is the act in which spirit or memory meets the vibrations which it contracts into concrete perceptions. In both cases, when we speak of pure perception, the work of memory is supposed in theory to be eliminated. I attempted to press the later view to its furthest possible point by putting the question, "Is pure perception the perception of a single vibration?" The question was unfortunately expressed: it seems to imply an actual experience of the pure perception, and Mr. Carr has no difficulty in showing that there can be no such experience. I never meant to suggest that there was, and regarded it as assumed throughout that the pure perception was something prior to experience and was being considered as a factor in the genesis of experience. It meant nothing more for me

than the act, whatever it is, in which spirit meets and grasps the vibrations which M. Bergson believes it to contract. If at the instant of meeting they are uncontracted and in succession, and if succession is, as M. Bergson holds, something real, we have to face the question whether the theoretical pure perception ought not to be, for M. Bergson, the meeting of spirit with a single vibration. It seemed to me that that view was actually implied by one of the passages which I quoted. Let me say at once that I have misunderstood this passage; I will return to it later; for I do not think that Mr. Carr quite does justice to the misunderstanding which he has pointed out.

Mr. Carr's note does not deal with the further questions to which I alluded, *viz.:* whether memory in the act of perception is to be regarded as meeting vibrations which are already contracted or not, and whether the different aspects of images and pure perception which appears in different parts of *Matter and Memory*, admit of reconciliation or not. I return to these points, because the references to them in my former note do not seem to me now to give quite a fair indication of M. Bergson's attitude.

The first of these questions brings us at once to the relation between M. Bergson and the Realists. Mr. Carr finds the distinction between them in the fact that realist theories make perception diaphanous. The following passage from Prof. Alexander will show, to those who understand his quaint but helpful terminology, how close the approach between the two views sometimes is:—

"We may consider the vibrations or other internal motions of bodies, but there still remains the single pulse of distinctive enjoyment into which those vibrations are 'condensed,' and which appears to our contemplation as colour. Hence it is not without reason that M. Bergson in the course of a highly suggestive passage, speaking from his own point of view, declared that if we could slow down the rhythm in which the colours are presented to our apprehension, the colour though diluted would remain" (*Method of Metaphysics and the Categories*, MIND, N.S., No. 81, p. 18).

The passage referred to is on page 268 of *Matter and Memory*. Just above M. Bergson has said: "Certainly the difference is irreducible (as we have shown in a previous work) between quality on the one hand and pure quantity on the other. But this is just the question: do real movements present merely differences of quantity, or are they not quality itself, vibrating so to speak internally, and beating time for its own existence through an often incalculable number of moments?" In this beautiful passage, as well as in that quoted by Prof. Alexander, M. Bergson seems for a moment to be a Realist. But on the following page he says of the Realist theory: "It wrongly sets up as absolute that division of matter which, in our view, is hardly anything but an outward projection of human needs". Can we allow M. Bergson this "hardly anything"? Surely he ought to make the division one thing or the other. Is our experience only the process of "breaking up for the greater convenience of practical life the continuity of the real"

(*ibid.*, p. 215), and is the continuity undivided, as it sometimes seems to be, or do the contractions which we make correspond to real lines of division? Are there real differences in the rhythms of things, independent of our condensations? Have the contractions, which are supposed to be made by memory, already been partially made, before memory begins its work? On page 239 we are told that "pure intuition, external or internal, is that of an undivided continuity"; and on page 292 it is assumed that "the divisibility of matter is entirely relative to our action thereon". But at the conclusion of the book the writer appears to return to the realist position. Mr. Fawcett, in the review referred to above, complains that with regard to panpsychism M. Bergson's thought oscillates. May we not say that it oscillates with regard to this aspect of Realism? Is it unfair to say that in *Matter and Memory* we have two pictures of the opposing current which spirit or memory meets,—one representing a more rigorous view, which seems to be required by a strict interpretation of M. Bergson's attitude, the other suggesting a more elastic view, which brings him into close approximation with the Realists? In my former note he was interpreted only with reference to the more rigorous view.

Much of the difficulty of *Matter and Memory* arises from the author's use of the word 'image'. On the first page of the introduction we read: "Matter is in our view an aggregate of 'images'. And by 'image' we mean a certain existence which is more than that which the idealist calls a representation and less than that which the realist calls a thing—an existence half-way between the thing and the representation. This conception is simply that of common sense." Now, whatever this means, it is clear that the image dealt with is the image which we get in our conscious perceptive experience. Again on pages 12, 13 we have two systems of images. One is the system "which I term my perception of the universe and which may be entirely altered by a very slight change in a certain privileged image—my body". The other is the system belonging to science, in which we get "the same images, but referred each one to itself—influencing each other no doubt, but in such a way that the effect is always in proportion to the cause; this is what I call the universe". In both these systems the images are still those which we get in our conscious perceptive experience.

It is the same images again which Mr. Carr deals with on the first page of his note, and whose genesis he describes when he tells that they are "a selection within, and a contraction of duration". Duration here is clearly not the duration of spirit which we live through in our conscious states. It is the duration referred to by M. Bergson, when he tells us that "the humblest function of spirit is to bind together the successive moments of the duration of things" (*ibid.*, p. 295). These successive moments are simply the vibrations and movements into which the physicist has resolved matter.

M. Bergson does not at first tell us the genesis of the image. But on page 26, when we begin to "consider how conscious perception may be explained," we pass to a new kind of image, which is thus described:—

"Reduce matter to atoms in motion: these atoms, though denuded of physical qualities, are determined only in relation to an eventual vision and an eventual contact, the one without light and the other without materiality. Condense atoms into centres of force, dissolve them into vortices revolving in a continuous fluid; this fluid, these movements, these centres, can themselves be determined only in relation to an impotent touch, an ineffectual impulsion, a colourless light; they are still images. It is true that an image may *be* without *being perceived;* it may be present without being represented; and the distance between these two terms, presence and representation, seems just to measure the interval between matter itself and our conscious perception of matter."

From this point onwards we must be prepared to have two matters—one an aggregate of the new kind of images, the vibrations and vortices of the physicist, the other an aggregate of the images of common sense which are constituted by the selection and contraction of these movements. To M. Bergson the difference between the two is one of degree and not of kind, and he feels at liberty to pass from one to the other. To the average reader the difference appears fundamental. Mr. Carr also, on the second page of his note, tells us that a single vibration is an image: but surely he has no right to do so after his accouut of images on the first page; a single vibration is certainly not a contraction of duration.

The introduction of this new kind of image reminds us of a passage in which the author of the 7th Platonic Epistle speaks of the untrustworthy nature of language as a vehicle for philosophical thought. He tells us "There is no reason why the things which are now called round should not be called straight, and the straight things round. For those who make changes and call things by opposite names nothing is less permanent than a name."

What is actually meant by calling the movements images? They are so called because they can be determined only in relation to an eventual vision and an eventual contact. In other words, if we are to speak of them at all, we must provisionally assign to them relations similar to those which determine our conscious perceptive experience. But surely this applies to every existence whatsoever which we can perceive, infer, or imagine—to everything, in short, of which we can speak at all. The word 'image' thus becomes a meaningless label which may be attached to anything which we can name.

Or is something more meant when the vibrations are called images? Are we to think that already, before they have been selected and contracted, they are something of the same texture as the spirit which meets them? This is what Mr. Fawcett seems to feel when he claims M. Bergson as a panpsychist, and at the

conclusion of his book (*ibid.*, p. 328) the latter writes: "Only one hypothesis remains possible: namely, that concrete movement, capable, like consciousness, of prolonging its past into its present, capable by repeating itself, of engendering sensible qualities, already possesses something akin to consciousness, something akin to sensation". But he has told us definitely that spirit is radically different from the matter which it meets, and if we consider the ground of resemblance which he finds between them in this passage, it seems clear that his attitude has little in common with that of panpsychism.

With this new view of images and of matter it might be expected that we should at once get the transition to a new view of pure perception. But this is not M. Bergson's method. We are told (*ibid.*, p. 34) that we are not called on to trace the origin of perception itself, in so far as it is an image, since we posited it to begin with. Accordingly he retains the common-sense position with regard to images and perception, while he is developing his view of the function of the body in the formation of our experience. Affective sensation is described and distinguished from perception. The meaning of extension is indicated, and there is a preliminary consideration of the position of the materialist. We are told (page 59) that our theory of pure perception must be corrected; but this only means that it must be freed from all impurities which have arisen from affective sensation. We reach the conclusion of this section on page 69, where we are told: "Such is our simplified, schematic theory of external perception. It is the theory of *pure* perception. If we went no further, the part of consciousness in perception would thus be confined to threading on the continuous string of memory an uninterrupted series of instantaneous visions, which would be a part of things rather than of ourselves."

But we do go further, and we do trace the genesis of perception, in spite of the fact that it was posited. "The moment has come," we are told, "to reinstate memory in perception, to correct in this respect the element of exaggeration in our conclusions, and so to determine with more precision the point of contact between consciousness and things, between the body and the spirit" (p. 70). The transition takes place on pages 74-77. The passage should of course be read in full. The essential point in it seems to be, that we are now to abandon the view laid down theoretically, that in our external perception we are joining together by the continuous thread of memory instantaneous visions of the real. There can be no such thing as an instantaneous vision; all visions occupy a certain depth of duration. If we wish to know what the sensible qualities of matter really are, we must disengage them from our particular rhythm of consciousness. They are thus resolved into an enormous multiplicity of vibrations which appear to us all at once, though they are really successive. We must divide ideally this undivided depth of time. Then matter "would tend more and more towards that system of homogeneous vibrations of which

realism tells, although it would never coincide entirely with them". It is not clear why the realist, whom, as we have seen, M. Bergson criticises for making the divisions of matter absolute, should here be charged with making matter homogeneous. The conclusion, which we are told that we shall reach in the last part of the essay, is thus stated: "Subject and object would unite in an extended perception, the subjective side of perception being the contraction effected by memory, and the objective reality of matter fusing with the multitudinous and successive vibrations into which this perception can be internally broken up".

Pure perception is not here defined afresh for as in so many words: but there can be no doubt that it is the point at which subject and object unite—and that, whereas originally it was the meeting of subject and subject in the formation of an instantaneous image, it is now their meeting in the contraction of vibrations. The whole passage is referred to immediately after as "our distinction between pure perception and pure memory" and again on page 83 as "our analysis of pure perception". We are told that pure perception gives us hints as to the nature of matter (*ibid.*, p. 77), that pure perception gives us the whole or at least the essential part of matter (*ibid.*, p. 81), that in pure perception we are actually placed outside ourselves, we touch the reality of the object in an immediate intuition (*ibid.*, p. 84).

The average reader expects that, when this new view of pure perception has been developed, the old one will not reappear. But M. Bergson assumes that whatever he has originally posited with regard to matter, images, and perception is still valid and may be appealed to, in spite of the fact that his magician's wand has turned it into something startlingly different. In all these cases the difference for him seems to be one of degree and not of kind.

Now let us pass to the passage on pages 237, 238 of *Matter and Memory* which was quoted in full in my previous note, and in which Mr. Carr points out a misunderstanding on my part. The last sentence was as follows: "Now if every concrete perception, however short we suppose it to be, is already a *synthesis, made by memory, of an infinity of pure perceptions*, which succeed each other, must we not think that the heterogeneity of sensible qualities is due to their being contracted in our memory and the relative homogeneity of objective changes to the slackness of their natural tension?" The italics are mine, and I failed to see that in the italicised words M. Bergson is going back to his earlier view of concrete perception as an uninterrupted series of instantaneous visions threaded on a continuous string of memory. I assumed that the synthesis, made by memory (Mr. Carr's note omits these three words), of an infinity of pure perceptions does not refer to a mathematical infinity, but is the same thing as the contraction, also made by memory of a large, but not strictly infinite number of vibrations. Mr. Carr thinks that, in identifying these two, I am making M. Bergson propound something essentially silly and convicting him of laxity and

confusion. But if we suppose the two things totally different, we have to face the question—How can one and the same concrete perception be both a synthesis, made by memory, of an infinity of pure perceptions, and a contraction, also made by memory, of many billions of vibrations? Memory is already rather hard worked in M. Bergson's system, but surely here we have got beyond the limit of its powers.

Mr. Carr does not give us an explanation of the passage; but if we have now got the right meaning of the italicised words, does it not follow that M. Bergson himself is bringing the two views together and telling us that if they are not exactly the same, they are extremely like one another? The view that concrete perception was a synthesis of instantaneous visions was only a theoretical view; it could not correspond to the real facts, after it has been proved that there can be no such thing as an instantaneous vision. The real fact is the contraction of vibrations. But M. Bergson seems to feel that the other view, having been posited, may be appealed to, and that it implies a power in memory very similar to the contracting power required in his explanation of heterogeneity. The synthesis is therefore brought back in order to show its relation to the contraction. The train of thought seems to be that, as the heterogeneity becomes more clearly marked, the contraction becomes closer and closer and approaches more and more nearly to the synthesis, but the two never exactly coincide. Perhaps M. Bergson would feel that my question about the single vibration was not altogether a foolish one, and that, though his pure perception must not be regarded as ever coinciding with a single vibration, still, as we dilute the heterogeneity of sensible qualities, the two will be constantly making a closer and closer approach to one another.

Whether this is so or not, it is the new view of pure perception, as the meeting of spirit with the actual vibrations before they have been contracted into heterogeneity, which makes it so important a feature in M. Bergson's dualism. The main point of his book is to show that our experience is the meeting of two reals, spirit in the form of memory and matter resolved into motion. A large part —perhaps the most valuable part—of his essay is devoted to proving that memory, in the form of recollection, is a real existence. This is followed by a criticism of the Zenonian paradoxes which proves the reality of pure motion. Matter, therefore, when completely resolved into motion, must also be a real existence. Pure perception is the act in which these two reals meet; and it must not be considered merely as a limit, or purely from the cognitive point of view. It is a "system of nascent acts which plunges roots deep into the real" (*ibid.*, p. 75).

It is this view of our experience which renders it unnecessary for the Bergsonian system to deal with metaphysical difficulties about the unknown and unknowable. The weak points in the theory are the absence of evidence for the contracting power of memory on which so much of it hinges, and the remoteness of the

new matter from the matter of common sense. M. Bergson considers that he is leaving to matter those sensible qualities of which it is stripped both by the materialist and the spiritualist (*ibid.*, p. 80). But surely common sense will feel that the matter resolved into vibrations, which is all that he leaves to it, has been stripped as bare as it was by the philosophers of either of those schools.

J. HARWARD.

VII.—CRITICAL NOTICE.

The Origin of Consciousness: An Attempt to Conceive the Mind as a Product of Evolution. By C. A. Strong, Late Professor of Psychology in Columbia University. London: Macmillan & Co. Pp. viii, 330.

The distinctive excellence of Dr. Strong's work is so well known that it would be out of place for us here to do anything more than extend a hearty welcome to this book. Its object is not to give an account of the origin of consciousness, but rather to prepare the ground by asking the preliminary question, How to conceive the mind so that its evolutionary origin shall be possible. And it is well that such a question should be strenuously tackled. Dr. Strong shirks no difficulties, burks at no facts; his candour and intellectual honesty are such as he has always led us to expect from him. An evolutionary origin of the mind, he thinks, does not involve its reduction to mere matter; but it does involve its reduction to feelings or sensations. And following the lead of William James, to whose memory the book is dedicated, he endeavours to show how this is possible. There are three difficulties in the way: *viz.*, that of the transcendence involved in knowing, of the unity of the self, and of the plurality and diversity of mental elements which such a reduction appears to leave on our hands. It is with these difficulties that the book is concerned.

It may be suggested at once that Dr. Strong's view of the mind is not the only view which renders the mind capable of fitting in with the evolutionary view, and that the doctrine of pan-psychism which results does not necessarily involve his premisses. A useful contrast might be made between Dr. Strong's pan-psychism influenced by James's psychology, and Dr. Stout's pan-psychism, influenced by Ward's psychology, which is no less evolutionary. We should like to have made this contrast in detail; for in many points in which Dr. Strong's conclusions are in agreement with those of Dr. Stout, our criticisms of Dr. Strong's arguments would not apply to Dr. Stout's.

The book is a sequel to *Why the Mind Has a Body*, published in 1903. Dr. Strong's pan-psychism has changed since then, and the changes in his views are here explained and defended. An epistemological basis is provided for pan-psychism by an account of sense perception on the one hand and introspection on the other,

which rests on what he describes as the vehicular theory of knowledge. That vehicular theory contains four main points, which cannot be summarised better than in Dr. Strong's own words:—

"Requirements of Logic.

"(1) The object must be kept free from admixture with the psychic state or with givenness.

"(2) It must be directly known.

"Requirements of Psychology.

"(3) There must be a psychic state or psyche concerned in knowing.

"(4) The knowing must be vehicular" (188-189).

(1) seems to conflict with (3), (2) seems to conflict with (4); and all the erroneous views in philosophy are by Dr. Strong related to an over-emphasis of one or other of these four requirements, resulting in non-fulfilment of the rest. His own theory endeavours to hold the balance between them.

There are then two main points in Dr. Strong's account of knowledge (and we devote attention to it because it is the basis of his whole view, and occupies three-quarters of his book): *viz.*, his account of givenness, and his account of sensation and introspection.

(i) Givenness is the term Dr. Strong uses to denote an aspect of the fact of awareness. When we are aware of an object something is given; and "as the fact that things are given is the least disputable of all the aspects of consciousness" (30), it is clearly desirable to use a term referring to this aspect in a study of consciousness. Givenness, it must be noted, is not equivalent to sense-perception. When I perceive an existing object, the existence of the object is not given. What is given is an essence. "Positively, an essence may be defined as anything whatever that we can think of or know, considered solely in regard to *what* it is, and not as existing; or, more briefly, as the entire *what* of a thing, without its existence" (38). Essence, in other words, is a "being of the logical type, and not an existent either physical or psychological". It is only by thus separating the being of an object from the "essence," which is all that can be given, that error is possible. Sense-perception is givenness of an essence plus "an implicit assumption, *shown by the way we act* (italics mine) that the given essence does in fact reveal an existing object" (39). This is put very clearly (40-41): "In perception the essence and the existence of the object divide, and the former alone is apprehended by consciousness, while the latter is asserted or assumed".

In expounding this view, Dr. Strong does not seem always to take sufficient care with his terminology. His first mention of "givenness" (30) identifies it with awareness. Consciousness is next (33) identified with awareness. We are then told (35) that

by "object" is to be meant "the real thing, existing in . . . space and . . . time". By essence is to be meant "anything that can be given, whether to sense-perception or to thought, considered not as given but simply in itself" (36). The thesis is put forward that "what is given in sense-perception is not the object as an existence, but only the object as an essence" (*ib.*). It is (37) an error to suppose that "what is given in sense-perception is the object itself, the very external thing". An essence is (39) a logical entity merely. So far, all is consistent. But the step taken on page 40 introduces some real confusion. He speaks of the essence that is given as *e.g.*, the essence "a cold object" or "a bell". And this encourages him to say (41) that it is "possible for an object to be given in a form more or less different from that in which it exists". "Object" here should clearly be "essence". But if "essence" were used throughout, and if it were clearly realised that only essences are given—that we are aware of, conscious of,—only essences, and that our belief in the existence of the essence as an "object" is a matter of instinct, which cannot be rationally justified (221), then the whole of the argument on page 45 would be impossible. It would be impossible for Dr. Strong to accept the propositions (1) "that existence is known only in experience," (2) that "from objects of experience other objects of experience can be inferred, but not existences that could not be experienced at all," and hence (3) that "if physical things and public space are not data, they cannot be inferred existences but only valid ideas about sensibles," and to describe this result as administering a blow to "common, I had almost said to good, sense" (45), without seeing that this argument, which he uses against the constructionists, is double-edged, and that its other edge cuts at his own view. For on his own view "things and public space" are emphatically not data; it is only essences which are data. It would be impossible for Dr. Strong to say as he does, that "a coloured and hard thing" is "experienced". For the sake of clearness he should say that a logical entity is "given," an existing object instinctively believed in; he should say this, and continue to say this, and refuse to speak of our knowing, cognising, perceiving, being aware of, an object, or of an object as being known, cognised, perceived, given, at all. Confusion is even worse when in his further criticism of the constructionist view, he argues that "the fact that . . . physical things are regarded by all men as real . . . shows that they, and not sensibles, are the true data of experience" (48); and when he further adopts this mode of speaking as the proper one for his view, excusing it by saying that "the object is given only as an essence; we are not conscious of its existence". For if the object is given only as an essence, only an essence and not the object is given, even if the object when known truly, would be identical with the essence. Dr. Strong's attempted compromise, of saying that what is given is not an existing object, but only a logical entity, and yet on the other hand is an object, and not a mere set of sensibles which have to be

correlated into an object, is unstable. If the constructionist gives us an atomism, it is at least an atomism of existents; and while Dr. Strong gives us a unity, it is only the unity of an essence. The object, *i.e.*, the existing essence, is and must remain, for Dr. Strong, assumed. "Given essence and actually existing object are," as he himself insists (51), "mutually independent". Dr Strong asks (48) as to the difference between an object that is given and also exists, and an object which is merely given. Surely "object" should have been "essence". He answers, that the intrinsic difference is that "the real object acts—that is, it is a source of changes in itself and other things. To recognise anything as existing is to recognise the presence of a source of change" (49). But how can you "recognise" anything as existing? An essence is given; you assume an object; you do not recognise it in the ordinary sense of the word. You act on the expectation that other essences will be given you: and so they are; but how can you ever translate—on Dr. Strong's premisses—the explanation of that successful action into a "recognition" of the "presence of a source of change"? Dr. Strong has really no right, on his theory, to speak of recognising, experiencing, knowing, the existence of an object. He can speak of "acting"; acting on instinct; but not acting on the assumption or belief that an object exists. If the existence of an object cannot be given, then it cannot be perceived or known or recognised in the ordinary sense of these words; and it cannot be assumed or believed either.

The theory as worked out is open to the same objections. The problem of Chapter III. is: "How can a sensation or mental image convey an essence?" (112). The answer consists in (*a*) an account of the nature of thought, and (*b*) a definition of givenness.

(*a*) Thought is re-presentation, re-givenness. It is direct knowing which is "the mere copy or duplicate of some previous direct knowing in actual experience" (113). "We understand by using the mental images, or, more exactly, the essences, which previous experience has left behind. Intellection completes the given object by imagining its context—*i.e.*, the objects connected with it, and the relations that connect. It is thus (so far as a matter of consciousness) *simply a more complicated givenness*" (117-118). It is "a mere superstructure erected upon cognition," "a mere imagining of what we have perceived before" (119). Its value, of course, is largely that it is "the more or less ingenious and probable imagining of what cannot yet be experienced" (117). But this imagining is essentially an imagining of what has been perceived before. This view of thought is necessary, he thinks, if the mind is to be conceived as a product of evolution.

It follows that what is given is fundamental, and is given without interpretation; interpretation being based on it and not adding anything new: being in short mere anticipation (in more complex form) of what was once given.

(*b*) What then is givenness? If we take Dr. Strong's words literally, givenness of an object as an essence is simply an aspect of

the reaction of the organism as if the object were present, whether the object be present or not, *provided this reaction is due to a sensation which bears in its own nature the impress of the object* (122).

Thus two things seem to be necessary to constitute givenness: (1) the reaction of the organism, (2) the presence of a sensation of a certain type causing the reaction. Thus he says (134), "a cognitive state is, in itself considered, a non-cognitive feeling". And also, "cognition consists in the . . . function by which sensations prepare us for and direct action." He speaks consequently of the sensation as "becoming the index of the object," and as thus acquiring "meaning or intent" (122); as being "used as a symbol" (123). But it is only in so far as the "non-cognitive feeling" prepares us for and directs reaction to an object that it becomes cognitive—that the essence "the object" is given.

Certain points must be noted. If givenness is essentially an aspect of the reaction of the organism toward an object as if the object were there (122), and if to react as if an object were present is implicitly to affirm the existence of the object (39-40), must it not follow that givenness is essentially bound up with affirmation of the existence of the object? And if so, on what grounds can it be said that affirmation of existence is an element of perception entirely distinct from givenness? (40). If page 41 be read carefully, the importance of this point will be seen; for it is just because only an essence is given, while existence has to be affirmed, that cognition may be false as well as true. But if there is not givenness apart from reaction, *i.e.*, from affirmation, then we can never do anything but affirm. We might decide that we had reacted wrongly, or to a wrong object; but we should never have grounds for supposing that our reaction was to an unreal object. For a non-cognitive feeling can become the vehicle by which an essence is given, only so far as it prepares us for, and directs reaction to, an object.

This criticism can be reinforced by another. We are told on pages 77-78, "how the relation of givenness comes to consciousness" (see 135). And the account is quite simple. The steps "are also the steps by which the ordinary man rapidly and intuitively arrives at his knowledge of consciousness. He finds that he has been (perceptually) wrong, that something appeared which was not real; and from this he at once deduces (1) that there is such a thing as an appearance,—*i.e.*, an essence, and (2) that there is such a function or relation as appearing—*i.e.*, givenness. Nor is there any reasonable ground on which these deductions can be impugned" (77-78). But there seem in fact to be two grounds on which these deductions can be impugned, on Dr. Strong's own views: (*a*) that to be conscious is essentially bound up with reacting as if an object were present (122, 134)—which affords no ground whatever for ever supposing the contrary; and (*b*) that to deduce, infer, is simply to perceive again what has been already perceived (113, 119)—and

hence the ordinary man could never infer an essence, or such a function as givenness, if he had not perceived these things already. And by the very account of givenness, he cannot perceive—*i.e.*, react towards—anything but an object.[1]

The difficulty is covered up by Dr. Strong's persistently speaking of consciousness, meaning, intending, to describe what he means as givenness. A rather interesting instance of the point is to be found on page 137, in his comparison of his view of cognition with James's view of emotion. "Just as James could (by an excusable hyperbole) say, 'We are angry because we clench our fists,' 'We are ashamed because we blush,' the advocate of the vehicular theory can say, 'We cognise because we attend and react'." The question is, whether he means this literally, or whether it is only "by an excusable hyperbole" that he can say it; and while the first few sentences on page 137 suggest that the hyperbole is present, the example of the cat at the foot of the page suggests that the statement is literal.

What difference is made to the reaction from the presence of sensations? And why must the sensations bear in their own nature the impress of the object? Let us take the second point first. I think that all that can be meant is that the sensations are directly caused by the object; for they can be hallucinatory (*i.e.*, in no way resemble the object) and yet help us greatly in our dealings with the object (66). Thus the only important question is the first: What difference is made to the reaction from the presence of sensations?

Certain points may be noted at once. The reaction can be very varied. It can be made when the object is in fact not present. We may bring out the significance of this by trying to use the same language in the case of an ordinary physical change. Can we speak of a material body as reacting? When a metal is heated it expands. Let us describe expansion as its way of reacting to fire, or any other form of heat. Now let us suppose further, that it could expand under its own internal molecular changes, and suppose that these internal changes are due to conditions brought about by its previous expansions and contractions caused by heat. Those who have used lamps in these troublous times will no doubt have realised an analogous situation. When the cold lamp globe,

[1] We would suggest an alternative account of error which seems to be more in harmony with Dr. Strong's account of givenness as an aspect of reaction. The ordinary man would, on this account of the matter, find that he has reacted toward the wrong object; and introspection would enable him to react toward the right object—*viz.*, his own mental state. This would next enable him to react towards the relation of externality between his own mental state and the other object which he originally reacted to wrongly. In this way "givenness" would come to consciousness. In this way introspection would be needed if the ordinary man was to be able to account for his having fallen into error. And the way would be opened for regarding introspection as a product of evolution, and not merely a by-product, as Dr. Strong inclines to think (202).

in the middle of the day, cracks with no apparent cause, can we say that it is reacting to a hot (or cold) object in the absence of the object? Such a description would, I think, be altogether illegitimate. Let us come now to the case where sensation is present. Does the presence of the sensation justify the description "reaction to an object *as if* the object were present (whether in fact it is so or not")?

If this description is to be justified, it must be for the sole reason that sensation does enable the organism to refer to an object, to mean or intend, or symbolise an object. But if this intending, this symbolising or meaning, is to be spoken of in terms of reacting, then the word reacting must contain meaning or intending as an essential part of its significance. And in this case, while purely material bodies can be connected in causal series, only psychic bodies can be said to react. All reacting will involve a meaning or intending of the object reacted to on the part of the agent. And this is perhaps Dr. Strong's view. But if so, the whole account should be altered in order to make this clear. For the word reaction would not mean what is ordinarily understood by the word; it would mean indeed what is ordinarily understood by "consciousness". So far from consciousness being explained in terms of reaction, the reverse would be the case. And then, when Dr. Strong asks, as he does perpetually, What better guarantee of the belief in the existence of an object can you have than the fact of your acting as if it were there? his question would really amount to asking, What better guarantee of the belief in the existence of an object can you have than the fact of your meaning or intending it? But this would give an entirely different colour to his theory.

(ii) We have found equal difficulties with Dr. Strong's account of the psychic state, which is the basis of his vehicular view of knowing. This is to be found in Chapter II. The bulk of the chapter is devoted to proving that there *are* sensations. The general position held is that "both in internal sense-perception and in external sense-perception there are sensations concerned which must be distinguished from the essences, and which are in fact the vehicles for these two kinds of cognition" (92-93). These sensations are psychic states. Again (91) "What is given . . . when psychic states are given, is not mere qualities, but existences, of a sort different from physical objects. I do not mean that the existences are given as such, but that essences are given which exhibit existences."

Look closely at the argument on page 93. It consists in taking cases of toothache, which is referred to a tooth, and as so referred brings before us "an essence which dimly exhibits the irritative process"; of the touch of ice, which "permits me to cognise the low temperature of the object"; and so on. No one will question, he says, that the ache, the touch of ice, is a state of our sensibility. "The sensations are in none of these cases our object—the datum is everywhere a purely physical property or state: but the sensation

is none the less existent as the vehicle of the datum, the means of the givenness of the essence. It is perfectly obvious that in all sense-perception a state of our sensibility is used as the means of apprehending the object. . . . The existence of the sensation is as sure as the fact of the specific perception." Dr. Strong is endeavouring to show that the toothache, the coldness, exists. But no one disputes that. What the realist insists is that they are a part of what is experienced. He will say that I experience the pain in the tooth, the coldness in my finger, as directly as I experience the low temperature of the ice, the irritative process in the tooth. It is not enough for Dr. Strong to point to their existence; he must show that they are experienced in a way differently from the way the physical objects are experienced; that, in other words they are *not* experienced, but only vehicles. His argument is that they are so obvious that no one can dispute their presence. But if they are so obvious as all that, is not the realist likely to be right in regarding them as objects apprehended, and not mere vehicles of apprehension?

The suspicion that there is a lack of clearness in Dr. Strong's mind on this matter seems borne out by his confirmatory argument in regard to after images (94 ff.) The case of vision, he says, seems to prove the realist right. In vision there seem to be no sensations, but only visible objects. But, he argues, visual after images prove that there are sensations even in the case of vision. I summarise his argument briefly, italicising for my own purposes. Look at the sun. Then turn the eyes to a bare wall. There is seen *on the wall* something—a visual after image. Note Dr. Strong's statements. The after image is *the thing on the wall*. This thing on the wall is recognised as not physical; it is not necessarily, or even usually, taken to be a hallucination. "We are too aware that it is a purely subjective phenomenon. What strikes the mind . . . and draws all our attention to itself, *is the unquestionable subjective existence that floats before our eyes* . . ." (94). It is the essence "a certain psychic state" (95). Now I do not see any possible opening for misinterpretation here. What Dr. Strong must be talking about is the thing on the wall. That, and nothing else, so far, is the essence "a certain psychic state". And it is psychic because it cannot be physical. But next, he confirms its psychical nature by going into detail (95). Actual observation, he says, reveals in the psychic state in question "characters which distinguish it clearly from the physical essence". What physical essence? we ask. It now turns out that the thing seen on the wall is a physical essence, which as such, is unreal; and the psychic state is the vehicle, whose relation to the physical essence is the same as that of any vehicle to a given essence. For he argues, that if the after image be first projected upon the thumb nail, then on a wall, etc., the object given will vary in size in the different cases; *i.e.*, in each case the physical essence will be different" (96). But, he continues, "at any moment, by properly directing the

attention, we can become aware that the after image itself has in all cases the same size"—that it only "brings before the mind a bigger object" in one case than in another.

Here is a new fact introduced. What was originally called the after image now turns out to be "an unreal object," brought before our mind by the real after image; and although originally the unreal object was declared to be psychical because of its non-physical nature, now the real after image is declared to be psychic because of its differences from the unreal object. It turns out that it is not what we saw, but that by means of which we were enabled to see that which we saw (the after image *qua* sensation, and not the after image *qua* object) that is psychic.

We are not yet finished, however. Examine arguments (2) and (3) on page 97. It turns out after all that it *is* that which we see, *the thing on the wall*, which is psychic. For as we move our eyes, the after image—the thing on the wall—moves too. We are aware of a movement, which is *real, experienced* as actually occurring (italics Dr. Strong's). But there is no illusion that it is physical. "Between what category of things then does it take place"? he asks. "The only possible answer is that it takes place between sensibles—that it is a change in the arrangement in the sensations by means of which we perceive objects" (97). These words ("it takes place between sensibles, etc.") have to be interpreted by means of page 318; but it is obvious from them that the after image, the thing moving on the wall, must be psychic.

Let us finally summarise. It is argued (*a*) that the after image—the object I see—is subjective because it is definitely known not to be physical, and because it is definitely experienced to be real (94, 97, argts. 2 and 3): and (*b*) that the after image—that by means of which I see what I see is subjective because introspection shows that it has a character different from the character of the object I see (95-96): (*a*) identifies the after image with what I see, and makes it the psychic fact; (*b*) distinguishes between what I see and the psychic fact by means of which I see what I see. To say nothing of the fact that according to (*a*) the psychic state is the existence pointed to by the essence, while according to (*b*) the psychic state is the vehicle by means of which the essence in question is cognised.

But this is not yet all. If we turn to page 105 we find that a psychic state can only be known by introspection; and that the only psychic states we can introspect are those of a moment ago. Further (106) the state of a moment ago is cognised by means of a state—perhaps a memory image, says Dr. Strong—existing now.

Apply this to the patch on the wall. I cannot see how any of the arguments used in connexion with it are compatible with the account given of introspection. If anything connected with after images is psychic, it is not because it is introspected. What in fact all Dr. Strong's arguments rely upon is the analysed difference

between some characters of what we see, and other characters of what we see. In fact after images are precisely like ordinarily seen objects in this respect. I look at a tree, and judge it to be two feet in diameter. I look at it again, and judge its appearance to be as extensive as the appearance of the gate-post between me and the tree. I am sure that I do not extrospect in the one case and introspect in the other.[1] I am sure that the judged size and the apparent size are both outside. Thus it is not any immediate character of the quality experienced which makes us call the one physical, the other psychical. So far I think we must go with the realists. But the question arises whether we must go any further. All the appearances are so far on a level. None of them have a label attached. But thereupon arises the problem of discovering their nature by other methods. The question becomes one of ordering the various facts in as simple a way as possible. The realist tries the way of widening his conception of what is physical. His opponent distinguishes between the physical and the psychical. However the matter is decided, it cannot be by introspection.

We have no space for an account of the remaining portions of Dr. Strong's book. If we have not referred to his very stimulating and thought-provoking discussions of the unity of the mind and of the nature of the ultimate psychic elements composing the mind, it is due to the inevitable limitations of space imposed on a reviewer. To do justice to them would require a separate article.

The book is so well arranged that the lack of an index is perhaps not so greatly felt as it would be in most books; but we cannot help thinking that an index would have been useful in enabling the reader to group together the various aspects of the different questions. In matters of philosophy, there should be no exception to the rule that every book needs an index, as perfect as it can be made; and philosophical writers should be the very persons to set an example of what an index could be. Messrs. Macmillan are to be congratulated on maintaining a pre-war standard of excellence in production.

LEONARD J. RUSSELL.

[1] "Physical size is the size given to us when we are in the attitude of sense-perceiving, or cognising an external thing, while sensible size is the size revealed to introspection, and belonging to the after image as compared with other existences of the same category" (96). I feel sure that this is wrong.

VIII.—NEW BOOKS.

Philosophy and the Social Problem. By WILL DURANT, Ph.D., Instructor in Philosophy, Extension Teaching, Columbia University. New York: The Macmillan Co., 1917. Pp. x, 272.

THE importance of this vigorously, brightly, and simply written sketch, by a member of the Columbia University Staff, lies in the fact that it is probably the first literary document that definitely exhibits pragmatism getting to work upon practical problems and applying itself to politics. For it must be admitted that despite its practical aim its output hitherto has been as purely theoretic as the theories it criticised, though it could doubtless plead necessity and other good reasons for this procedure. As a document with a practical intent, however, Dr. Durant's book contrasts very favourably with the vague verbiage and pusillanimous aloofness which has figured as 'political philosophy' in the academic tradition; so much so that it would seem to justify a prediction that when pragmatism descends from the study into the street in full force, it will assuredly be true to itself, and will emphatically 'make a difference'.

It is interesting, therefore, to follow Dr. Durant's plan for doing so. He begins, with admirable clearness and directness, by telling his readers what he is driving at, and so enables them to judge at every step whether he is approaching his objective or straying from the road and getting lost in the philosophic fog. So he declares that the purpose of this essay is to show: first, that the social problem has been the basic concern of many of the greater philosophers; second, that an approach to the social problem through philosophy is the first condition of even a moderately successful treatment of this problem; and third, that an approach to philosophy through the social problem is indispensable to the revitalisation of philosophy. He next, *mirabile dictu!* defines his terms. By 'philosophy' he means "a study of experience as a whole, or of a portion of experience in relation to the whole"; by 'the social problem' "the problem of reducing human misery by modifying social institutions. It is a problem that, ever reshaping itself, eludes sharper definition; for misery is related to desire, and desire is personal and in perpetual flux" (p. 1). Or more succinctly his problem is "the mutual elucidation of the social problem and philosophy" (p. 3). His method is to select, as representative philosophers who have really cared for the social problem, Socrates with his "plea for intelligence," Plato with his vision of the philosopher-king, Bacon with his "dream of knowledge organised and ruling the world," Spinoza with his "gentle insistence on democracy as the avenue of development," and Nietzsche with his "passionate defence of aristocracy and power" (p. 269). The entire appropriateness of this selection, and of the interpretation of the selected which it implies, may be questioned, and in particular the choice of Spinoza as the philosopher of democracy, instead of Protagoras or William James, may seem bizarre; but Dr. Durant contrives to discourse agreeably and competently about them all.

This bird's-eye view of philosophic history, however, is only intended to lead up to a most audacious proposal, which is nothing less than a revival of the Platonic programme for the Rule of Reason, and opens out a most terrific prospect to the prudence of every professor who values his job or even his life. For holding that "intelligence is organised experience," and that philosophy is needed "to point the nose of science to a goal" (p. 224), Dr. Durant infers that "intelligence itself must be organised" (p. 227). So let the professors, who at present "suffer from intellectualism, academitis, overfondness for theories and other occupational diseases" (p. 229), get together and organise themselves into a *Society for Social Research* and discover and publish *the real facts* about the subjects of political dispute, coldly, impartially, unrhetorically, but all the more convincingly. Let them form, moreover, a Committee on Literary Awards, and put on it the authorities that would guide the public taste. Thus would the people be enabled, for the first time in history, to get at the truth, pure, unmimicked, unalloyed, about all matters of human interest; and truth would rule, not by repressing ignorance and folly, but by dispelling it. And with truth would rule philosophy, and the Philosopher-king would merely mean that "the liberator is made king" (p. 254).

Truly a nobly Utopian vision, nobler perhaps than Plato's! But, it is to be feared, as vain a dream. For much as in Plato's scheme the first two steps to the realisation of the Kallipolis contained impossibilities, *viz.*, the son of a king willing to become a true philosopher, and the adult population willing to be exiled in order that its children might be remoulded by the true education, so in Dr. Durant's the very first step would probably import the seeds of a fatal corruption. It postulates (p. 230) "an inspired millionaire to finance the movement" for discovering the whole truth and nothing but the truth: but would a Society so originated, and administered, presumably, by Trustees of the highest repute and considerable antiquity, be capable of publishing truths that were unpalatable to millionaires? One is reminded of the fate of Sir William Osler's joke that, so far as advancing knowledge was concerned, the proper place for men over 60 was the lethal chamber; it was gravely confuted by the complete consensus of the great authorities interviewed by the newspapers, which noticed as little as the public that they had all attained their three score years and ten!

But even supposing that the Society for Social Research could get itself started, what would be its fate? It is quite true that truth is a great power, and that for this reason all lies mimic it; also that "there is nothing so radical, so revolutionary, as just to tell the truth" (p. 263). Also that if the Journal of the Society for Social Research had a circulation of a million voters, millions would be given to control it (p. 260), and that, as Dr. Durant himself sees (p. 252), "as soon as your society exercised real power on public opinion it would be bought up, in a gentle, sleight o' hand way, by some economic group . . . and justice would have another force to contend with". If, however, contrary to all reasonable expectation, by some divine chance it escaped the danger of secret corruption, it would be suppressed by force of law. For it would inevitably fall foul of the actual rulers of the world, who have always and everywhere held that whatever can be made to work is 'true,' or true enough for their dupes. Consequently the Society would everywhere encounter a far more powerful organisation, armed with all the powers of the State. A Ministry of 'Propaganda'—for the dissemination among the people of 'truths' which it was *convenient* for the rulers that they should believe—would combine with a 'Thrasymachean' (or rather 'Kleitophontic') Ministry of 'Justice'—for the enforcement of what the

rulers believed to be to their interest—and together they would control the Department of Education, with consequences which may easily be imagined by students of 'patriotic' text-books of history everywhere. Hence the Society for Social Research would probably become a new instrument of government. Or else it would have to court martyrdom. Now, abstractly, that might be quite a good thing. Philosophy has paid no blood tribute *to the State* since Socrates, and to produce a second Socrates would no doubt raise its repute. But one would feel more sanguine about the organisation of truth-telling by American professors, if they had previously succeeded in emancipating themselves from their Boards of Trustees by organising themselves into a trades union. Still Dr. Durant's idea, into whatever hands it falls, appears to have a future; and his book certainly makes a stimulating introduction to philosophy.

F. C. S. Schiller.

The Present Conflict of Ideals. A study of the philosophical background of the world war. By Ralph Barton Perry, Professor of Philosophy in Harvard University. Longmans, Green & Co.

If, as many believe, the world war may justly be regarded as the result of the tendencies of contemporary philosophy among the various great nations taking part in it, this book should take a high place among the attempts to interpret the deeper causes of the war. It is not to be classed among the ephemeral pamphlets, written either to condemn or to justify the conduct of Germany in the light of German philosophy, and reflecting merely the animus of the partizan or propagandist. It is indeed limited in its scope. For Professor Perry does not claim to possess sufficient acquaintance with the mentality and literature of Russia, Italy and Japan to include them in his survey. But with regard to Germany, France, England and America he succeeds, as far perhaps as a contemporary and a belligerent could reasonably be expected to do so, in presenting the case temperately and objectively, while frankly admitting the side on which his sympathies lie. There will be some, however, who will disagree with the underlying assumption of the book, and will hold that what has happened has been in spite of rather than because of the various philosophical ideals. It is indeed inevitable that all parties to such a conflict should be carried along by it further than they had originally any intention of going. And so although their conduct is in part the result of their principles, it would probably be truer to say, that fresh theories and ideals have been accepted or professed in the course of events. And if the belligerents had fared differently, it is quite likely that the same principles might have been alleged to justify a different policy.

Even if such a general criticism be admitted, the book is still valuable for its analysis and classification of many of the chief tendencies of contemporary thought. Professor Perry stands out as one of the chief representatives of the new American Realism. That is the standpoint from which the book is written, although it is not obtruded on every page. And from this book it is fair to estimate to some extent the merits and defects of the new school. The position of the new Realism is expounded in chapter xxv. In asserting the "independence of the fact" it "desires to justify and to transpose to philosophy, the attitude of science". That doctrine is fundamental to all Realism. Professor Perry proceeds to discuss Platonic Realism and the "externality of relations". He then explains that the differentia of the American Realism is to be found in its doctrine of the "Immanence of Consciousness". Consciousness, according to the new school, is "homogeneous and interactive with its environment," not either (1) "coextensive with the totality of things," or (2) "a

peculiar substance, absolutely distinct, for example, from corporeal substance, and incapable of entering into any commerce with it". Apart from this special doctrine of the Theory of Knowledge the New Realists are in other respects in agreement with Pluralists in general.

When one attempts to estimate the strength and weakness of the new school from Professor Perry's studies in contemporary thought, it must certainly stand to his credit that he makes a genuine attempt to state fairly what are the actual tenets of those whom he is criticising. He approaches other thinkers with a real desire to know what they mean, and without any *arrière pensée* of discrediting them in advance, before they have had an opportunity of stating their views. He does not covertly attribute to them his own presuppositions for the sake of undermining their standpoint. If he ever misrepresents them, it is because of his excessive fondness for hard and fast lines of classification, which sometimes fails to do justice to the richness and variety of the subject matter, but never from any wilful intolerance or personal bias. This is a very considerable merit.

On the other hand, it may seem to those who are not convinced by New Realist arguments, that the possibilities of fruitful development in philosophy on these lines are distinctly limited. If externality is an ultimate category, as apparently we are intended according to this school to suppose, all reality tends to be reduced to one level. We can only represent the world on a kind of Mercator's projection. Distortion somewhere is inevitable. The effect of this tendency to externalise everything is particularly unfortunate in the case of value, which is thus distorted into a kind of fact. Logic by such a method is unduly assimilated to mathematics. And it becomes quite impossible to do justice to the phenomena of consciousness. We are required to interpret the whole of experience from our inspection of it in a single cross-section. The cross-section or Mercator's projection may be worth examining and repay study for certain purposes of analysis; but to interpret experience as a whole, we require to plunge into it at different levels. And this we are not permitted to do. We begin our study of the processes of thought too late, and yet we are not permitted to follow them out to their furthest conclusions. And so we are precluded alike from entering into the living development of thought or reaching the centre of reality. Any effective criticism of categories, any true dialectic is out of the question. And this equally for the purpose of constructing one's own position or for demolishing that of one's opponent. Hence there is a certain lack of definiteness and conclusiveness in the book. We are invited to consider a number of tendencies in contemporary thought. But it is hard to specify any definite conclusion towards which they lead. The title of the book refers to a conflict of ideals. But somehow, although many different kinds of ideal or lack of ideal are specified, we are not made to feel, with any keenness, that the conflict between them is acute. They are passed in review one at a time, each in turn, and then they are left. It must not be imagined that Professor Perry's appreciation is not frequently just, or that his criticism is not often to the point. He breaks new ground most perhaps in the chapter entitled "The Gospel of Action and Movement". But he does not always seem to realise the full force of the tendencies he is interpreting. Indeed, it may be doubted whether he has entered fully enough into the movements of the time to feel them profoundly, or is sufficiently detached from them to discuss them vigorously.

He sees well enough the main currents of thought within contemporary civilisation. But when he is faced with the more radical criticism, which calls in question the principles on which that civilisation is based, he

does not always know what to make of it. For instance, he discusses Nietzsche after Darwinism. But surely, while all would admit the many-sidedness of that writer, which makes it difficult to decide how to classify him, it is nevertheless better to group him, as Höffding does, under the Philosophy of Value than as a post-Darwinian. The value theory of Nietzsche is certainly more important than his Evolutionism, although of course he has affinities in both directions. But, as has been observed, Professor Perry's treatment of value is not adequate. In this connection too he does not make what might have been a good point. Among English thinkers Edward Carpenter stands out as a radical critic of modern civilisation, far less brilliant than Nietzsche, but also without his vitriolic insanity. Professor Perry might have instituted a comparison between them and argued from it, that British revolutionary tendencies before the war were more wholesome than those of Germany. Yet Carpenter's name does not occur in the book, at any rate not in the index.

There are some misprints—page 153, foot-note, *inciting* for *In citing :* page 175, *tenanciously* for *tenaciously :* page 180, *Kelleter*, apparently for *Ketteler*. Also there is a slip of the pen on page 494, "British thinkers such as Froude, *Mommsen* and even Carlyle".

C. T. Harley Walker.

*The Philosophy of Mr. B*rtr*nd R*ss*ll.* Edited by P. E. B. Jourdain. George Allen & Unwin. Pp. 96.

In this valuable work Mr. Jourdain has collected the writings of the late Mr. B*rtr*nd R*ss*ll and published them with the addition of some further fragments found in that philosopher's interleaved copy of the *Prayer-Book of the Free Man's Worship*. The main body of the manuscript was rescued with difficulty (we are told in the preface) from the flames of Mr. R*ss*ll's house, which was set fire to by a number of enthusiastic upholders of the sacredness of personal property, on that fatal day in July, 1911, when the philosopher himself 'got into touch with reality' and was torn to pieces by Anti-Suffragists. Mr. Jourdain, with his usual passion for historical accuracy, has enriched the text with continual references to the works of other authors in the same field, such as Frege, Schröder, Russell, and John Henry Blunt (whose *Annotated Book of Common Prayer* is by the bedside of every symbolic logician.) He has also added a valuable appendix in which the logical views of Mr. R*ss*ll are compared point by point with those of the characters in Lewis Carroll's works.

I do not propose to enter in detail into Mr. R*ss*ll's views, which the reader can study for himself in Mr. Jourdain's book. Many of them have been made familiar to us since he wrote by Mr. Russell (whose life and writings present many curious parallels to those of his deceased friend). Perhaps the most important novelty of Mr. R*ss*ll's in logic is his proof that jokes form a hierarchy in the sense of the Theory of Types. He suggests the possibility of jokes of a transfinite order 'which excite the inaudible laughter of the gods'. Let us hope that they are all 'well ordered'.

There are just three points that need some discussion: (i) the case of the 'philosopher M.' who doubted that false propositions imply all propositions; (ii) the question whether Humpty-Dumpty was an Hegelian; and (iii) the question: Is the Mind in the Head? On the first and third of these matters I have some additional information to offer.

(i) Unless my memory altogether deceives me I was present in the rooms of the 'philosopher M.' when he expressed his celebrated doubt as to whether the proposition $2 \times 2 = 5$ implies M. is Pope of Rome. The

mathematician H. was present, and, on the spur of the moment, evolved the perfectly conclusive proof, given by Mr. R*ss*ll on page 40, that this implication does hold. So I think that the credit must go to the mathematician H., who is not mentioned in the present work.

(ii) I am not convinced by the arguments to prove that Humpty-Dumpty was an Hegelian. True, he could not understand mathematics. But, granted that no Hegelian can understand mathematics, so many other philosophers are in the same position that Humpty-Dumpty's defect does not add appreciably to the probability of his being an Hegelian. After all he might as well have been a Bergsonian. No doubt his synthesis of belt and cravat seems to favour the Hegelian hypothesis; but when we remember that Bergsonians are able to persuade themselves that colours *are* vibrations, we see that the confusion of a belt and a cravat (which are at least *in pari materia*) would be child's play to Humpty-Dumpty if he were a Bergsonian. Again, Humpty-Dumpty's preference for seeing the sum 365 − 1 = 364 'in writing' is much more in accordance with Bergson's views of mathematics than with Hegel's. Lastly, our historical information about the career and painful end of Humpty-Dumpty is strongly in favour of the Bergsonian hypothesis. Surely it illustrates only too clearly the *elan vital* dropping down into mere mechanism, from which 'all the king's horses and all the king's men' cannot restore it, thus furnishing an ideal first-order joke for Bergsonians. It cannot simply have been an Hegelian 'collapse into immediacy'; for that would have been followed by a synthesis, which, we are told, could not be accomplished in Humpty-Dumpty's case.

(iii) A new view as to the question of where the mind is was revealed to me lately by an observation overheard in a tea-room in Dundee. A lady at my table was pouring out for a family party and made some mistake about milk or sugar. She observed (in a Scots accent which, as a foreigner, I do not attempt to reproduce), 'I don't know where my brain can be; I'm sure it can't be in my head'. I conclude that she held the very unusual view that her *mind* was in her head permanently, but that it could only work on her body when her *brain* happened to be there too, and that her brain was liable to wander to other parts of her body.[1]

In conclusion we may heartily recommend Mr. Jourdain's book to all who can appreciate jokes of orders above the first or desire to get some notion of the High Table at Trinity as it was before the war came and spoiled everything.

C. D. Broad.

The Principles of Citizenship. By Sir Henry Jones. Macmillan, 1919.

It was a happy suggestion of Sir Henry Hadow that led, as we learn from the preface to this little book, to the Y.M.C.A. asking Sir Henry Jones to write an account of the principles of citizenship for the classes in 'civics' which a year ago it was forming among our soldiers at the front. Like all that comes from its author, it is sympathetic, inspiring and, in the best sense of both words, at once philosophical and religious. It would have been this, had it been no more than a repetition of his University teaching for the benefit of a new audience. But it is more; it represents the fruit of his meditations when 'like numberless other persons, driven back upon' himself 'by the war' and 'obliged to ask whether after all' he and the science he professes have any use. These meditations

[1] Can she have been a disciple of Prof. Alexander? The question is perhaps unanswerable till his Gifford Lectures have been published; but she may have heard and possibly misinterpreted them.

have, however, left him as convinced as ever that neither emotion nor faith, feelings nor intuitions can do the work of reason; and at a time when many 'substitutes for reason' (p. 21) are loudly advertised, this profession of loyalty to the true mistress of all philosophers is welcome.

For Sir Henry Jones two faiths were at grips with one another in the war; the faith that the State has no duty but to be strong and the faith that her supreme purpose is moral. The latter faith is his own; but he is careful by a fine exposition (in ch. 4) of the truth contained in the Hegelian theory of the State to remind us that it is more important to bear in mind what is of permanent value in that theory than to abuse it on account of the 'corrupt following' of it by our late enemies. He parts company decisively with this 'corrupt following' when he says (p. 140) that 'the State has no authority except on the assumption that it also speaks in a name that is higher than its own'. But when he describes this higher as 'the *good* of all rational beings' and tells us that 'natural rights are in the human being in virtue of the recognition of a common good,' he, like other thinkers of his school, takes too much for granted the obviousness of the connexion between the correlative conceptions of authority and obligation and the notion of a 'common good,' and the possibility of *explaining* the former by the latter.

While insisting eloquently on the importance of regarding the State as moral in its purpose and function, Sir Henry Jones makes it clear that so to regard it does not necessarily involve us in 'the cardinal error of pacifism' (p. 72), the belief, as he puts it, in the absolute value of the particular fact and forgetfulness that 'duty is never done *de haut en bas*'. The problem of the 'conscientious objector' is wisely and understandingly handled on pp. 158-9.

On the future relations of capital and labour among ourselves, the difficulties in adjusting which are largely due, as he points out, to the fact that we, like the Germans, have allowed material progress to outrun moral, although we have not justified our fault by making it our creed that the State is above morality—Sir Henry Jones's position is one of generous but not undiscriminating optimism. And this optimism is rooted in his religious faith. The admirable and inspiring little book ends on a religious and indeed (in a quotation from Tennyson) on a definitely Christian note.

C. C. J. W.

The State in Peace and War. By JOHN WATSON, LL.D., Litt.D., D.D., Professor of Moral Philosophy in Queen's University, Kingston, Canada.

Professor Watson is in political philosophy a disciple of Green; and those acquainted with the teaching of the school to which he belongs will find little in this work which is not already familiar to them. It is a fundamental feature of this teaching that the notion of obligation is assumed to depend upon that of a 'common good' far more obviously than to the present writer it seems to do; and the consequent subordination of the former notion to the latter by thinkers who are justly regarded as standing for the ethical and spiritual interpretation of human life has, I venture to think, had an unfortunate effect upon the attitude toward political authority of a generation brought up in an intellectual atmosphere which these members have done much to form. It is without surprise that we find Prof. Watson doing something less than justice to Kant's theory of punishment; for, although Kant's use of the word 'autonomy' must bear a considerable share of responsibility for the subsequent tendency to find in the conceptions of a 'common good' and a 'general will' an adequate

explanation of 'authority,' the consciousness of obligation is with him primary and self-explanatory in a sense in which it is not (for example) Green—and his theory of punishment is closely linked with this view of the consciousness of obligation. The most interesting chapter in Prof. Watson's book is the ninth, in which he distinguishes the relation and absolute sovereignty of the State and criticises the views of Mr. G. D. H. Cole.

I may be allowed to add that Prof. Watson scarcely seems to realise that our progress in the knowledge of mediæval thought has reached a point at which a scholar can no longer without fear of reproach give with an air of assurance, after a scanty survey of some accredited books of reference, such a second-hand account as appears in ch. iii; the value of which is sufficiently indicated by the confident statement on p. 71 that by the Scholastics 'philosophy was employed solely in support of the accepted doctrines of the Church'. Again, to say (in words which would certainly amuse Lord Bryce himself) that 'Lord Bryce has *shown conclusively*' (the italics are mine) 'that the Roman Empire did not cease with the extinction of the Western Empire in 476' is rather like saying that the late Mr. Gardiner had 'shown conclusively' that the title of King of France was not abandoned by the English sovereigns till 1800, because one had happened first to learn the fact from his history of this country. A misprint (the omission of 'as') on p. 157 unfortunately makes Mill seem to say the opposite of what he really does say.

C. C. J. W.

Cultural Reality. By FLORIAN ZNANIECKI, Ph.D., Lecturer in Polish History and Institutions in the University of Chicago. University of Chicago Press, 1919. Pp. xv, 359.

This book may be regarded as a characteristic product of the (Western) American Sociological school. It claims to be "the first part of a general introduction to the philosophy of culture, to be supplemented soon by a second part bearing upon the fundamental principles of creative activity". It "intends to lay the formal foundations" for a "philosophy of culture which has" a standpoint and a method applicable to the entire field of research which has belonged or can belong to philosophy. The author proceeds to comment on "the paradoxical situation" of modern professional philosophy, "which is slowly waning for lack of material," while there is a wealth and variety of materials for philosophising as never before (p. v). This situation he attributes to the futile antagonism between a stationary idealism which, whether it calls itself "Platonism, mediæval realism, Kantianism, Fichteanism," has "lost all touch with modern science" (p. 5), and a naturalism which "considers free creation a psychological illusion," and rules out all intellectual, moral and æsthetic values. For both he wishes to "substitute a new culturalistic philosophy" which, based on history, recognises values on the one side (though it denies that any are absolute), and on the other, "the growth of the range of control which we exercise over nature" (p. 17), so that "nature as it is now is in large measure the product of human culture" (p. 22). Such a programme is, of course, bound to bring him into contact with humanistic pragmatism, though it is not easy to gather from the present volume how precisely he will ultimately conceive his relations to it. For so far he is too much concerned with laying deep the 'formal foundations' of his 'culturalism,' and gives little indication to his reader of the plan of the whole structure. He declares, however, that he is "inclined to consider himself almost a disciple of pragmatism" though "to become an orthodox pragmatist would mean to sacrifice the spirit for the letter" (p. xiv),

and though he (no doubt rightly) thinks it is high time that pragmatism should substitute systematic reconstruction for criticism of "traditional dead doctrines".

As a matter of fact, judging by the surface indications, I should say that Dr. Znaniecki appears to be a pragmatist of the Chicago School. Indeed, I know no one who has developed and analysed some of its characteristic conceptions more elaborately. His account of the interplay of thing, situation, scheme ('plan') and 'practical dogma' (= working belief) is very full and constitutes a valuable contribution to the theory of the 'making of reality'. The one assumption I should be most disposed to question, *viz.*, that the antithesis of 'practical' and 'theoretical' is fundamental and adequate, may be only methodological; for page 325 postpones to a more convenient occasion the problem of "the connexion between practical and theoretic activities as such," though to be sure even this formulation seems in strictness to rule out the possibility that 'pure theory' may prove to be an abstraction which it is impossible to carry through consistently. Otherwise Dr. Znaniecki is generally right in what he says, from a pragmatic point of view, especially in recognising the importance of values. But from a literary standpoint he errs by saying too much and saying it much too solemnly. His argument would gain enormously if it were cut down to half its length, relieved of two-thirds of its technical jargon, illumined with illustrations, made digestible by recourse to the arts of exposition, and hence equipped with forecasts, summaries, sections and analytical tables of contents. As it stands it is too painfully clear that it is of the books written for professors by professors when they are seized with apprehension lest their subject should degenerate into popularity. But this no doubt was intentional—for had not a university press to be found to publish it?

F. C. S. Schiller.

Evolution and the Doctrine of the Trinity. By Stewart A. McDowall, B.D., Cambridge. At the University Press, 1918. Pp. xxvii, 258.

The writer of this volume endeavours to show that the doctrine of the Trinity can be rationally interpreted. He assumes that God must be personal, and then proceeds to argue analogically from the nature of man to the threefold nature of the Godhead. The book is interesting and sometimes suggestive, while it is marked by considerable independence of thought. But, if one may judge from his lack of discernment of the difficulties involved in some of his theories, Mr. McDowall's philosophical knowledge is not very thorough; and his psychological equipment is conspicuously defective.

The attempt to find an image of the Trinity in the nature of man is as old as Augustine, but Mr. McDowall is no more convincing than the Church Father when he argues from a triplicity in human nature to tripersonality in God. God, we are told, is both immanent and transcendent, and is limited by the world and man only in the sense that He limits Himself. The transcendent sphere is the sphere of pure being or absolute reality, while the immanent sphere is the sphere of becoming and of relativity. The transcendent or perfect experience of God is that of simultaneous reality—an eternal now. It is not explained how a Divine Mind which excludes changing states can be conceived as a personal consciousness. Again, it is said that God reveals Himself through his attributes, which are the modes in which He is manifested to beings external to Himself: the attributes are not primary but derivative. Yet this line of thought, which appeared in the Alexandrians and Neo-Platonists,

tends to reduce the absolute nature of God to the abstraction of pure being, and empties it of religious value. It is significant that the author thinks goodness can only be predicated of God in His relation to the world and man.

Mr. McDowall contends that the nature of man reflects God and helps us to interpret Him. Man manifests the same union of transcendence and immanence, and the true direction of his life is from process to pure being. The human subject discloses the three aspects of Fatherhood, Sonship, and Spirit as the unity of both. In psychology this corresponds to conation or creative striving, to cognition or mediatorial function, and to affection, the feeling which links the other two. The writer's defective psychology appears when he says: "I must look on myself as three hypostatised functions, three personal entities, when I, by introspection, consider what makes up the unity that I call myself". It is hopeless, we may add, to argue from the psychological distinctions of thought, will, and feeling to the possibility of a trinity of persons in one personality. As another illustration of confused and inaccurate psychology take the following passage: "For conation is the manifestation of will, cognition is the basis of intellect, and affection emerges from feeling, or sensation, and is emotional". And when Mr. McDowall goes on to remark, "I am one and free through my emotions," and speaks of emotion as 'a free cause,' one can only wonder what he means by emotion.

The book is a candid effort to deal with a difficult problem, but it will not convince many.

G. G.

The Relation of John Locke to English Deism. By S. G. Hefelbower, Professor of Philosophy in Washburn College, Topeka, Kansas. The University of Chicago Press. Pp. viii, 188.

The volume before us contains an investigation of a definite historical problem, *viz.*, the nature of the relation between the religious and philosophical views of Locke and the positions taken up by the group of writers who constituted the Deistic Movement in the England of the latter part of the seventeenth and the first half of the eighteenth centuries. After a survey of previous answers to this question, some remarks on method, and an examination of the part played by "the two focal concepts" of Nature and Reason in the thought of the age, the main problem is itself tackled. This is done by means of a detailed comparison between the views of Locke and those of the leading representatives of Deism on the chief points at issue in the Deistic controversy, supplemented by a consideration of the direct evidence of any influence exerted by Locke upon these thinkers. The conclusion reached is that while Locke and the Deists belong to the same general movement, there is no justification for regarding the relation between them as one of dependence, or for attributing to the philosopher any definite responsibility for the development of the specific tenets of the Deists. The author's examination of the evidence is painstaking and thorough, and his conclusion on the particular point raised by him seems to me to be amply substantiated. So far as Locke's religious views are concerned, they were undoubtedly rather those of the liberal opponents of Deism than of its supporters, while the whole controversy had little direct relation either to philosophy or to the more fundamental conceptions of theology. In his occasional references to those larger questions the author's touch is apt to be less sure. Thus, to take a single instance, it is disconcerting to read that Locke "perhaps recognised the cosmological proof" of the existence of God (p. 85), whereas elsewhere it is rightly stated that Locke's own proof was the cosmological, and that he regarded it as demonstrative.

J. G.

Myself and Dreams. By FRANK C. CONSTABLE, M.A. London: Kegan Paul, Trench, Trubner & Co. New York: E. P. Dutton & Co. Pp. xii, 358.

There hardly seems to be novelty enough about Mr. Constable's speculations about ultimate problems to compensate for their obscurity, but psychologists should be interested in his Preface. They may learn from it that "in the year 1867 personal human experience convinced me not only that personality survives death but that we, still in the body, may have communion with the disembodied. . . . That experience of 1867, and two, later, of a like kind . . . have certainly affected my direction of thought. I believe they have changed my life and conduct," and will probably infer that if other writers on philosophy were equally candid about the origin of their stimulus to philosophise, the belief in a dispassionate love of pure thought could not long survive such revelations. There is a curious passage on p. 233 crediting Kant with a confusion arising from "his use of the omnibus word tuition": presumably this is a misprint for "intuition".

Received also—

George Galloway, *The Idea of Immortality: The Baird Lecture*, 1917, Edinburgh, T. & T. Clark, 1919, pp. viii, 234.

Franz Boas, *Kutenai Tales; Bureau of American Ethnology*, Washington Government Printing Office, 1918, pp. xii, 387.

Julius Pikler, *Sinnesphysiologische Untersuchungen*, Leipzig, Johann A. Barth, 1917, pp. viii, 513.

C. E. M. Joad, *Essays in Common Sense Philosophy*, London, Headley Bros., 1919, pp. 252.

Vladimir Soloryof, *The Justification of the Good: An Essay on Moral Philosophy*, translated from the Russian by Natalie A. Duddington, London, Constable & Co., 1918, pp. lxiii, 475.

W. H. B. Stoddart, *Mind and its Disorders*, 3rd edition, London, H. K. Lewis & Co., 1919, pp. xx, 580.

A. N. Whitehead, *An Enquiry Concerning the Principles of Natural Knowledge*, Cambridge University Press, 1919, pp. xii, 200.

IX.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xxviii., No. 1. **H. N. Gardiner.** 'The Psychology of the Affections in Plato and Aristotle, II. Aristotle.' [Exposition of Aristotle's doctrine. Aristotle comes nearer than any other ancient writer to the discrimination of the psychological point of view; and his account of emotion, imperfect as it is, and especially his view of pleasure as a concomitant of the normal exercise of vital function, though that, too, is incomplete, are of permanent pyschological value.] **A. K. Rogers.** 'The Place of Pleasure in Ethical Theory.' [The feeling-tone which constitutes the nature of approval, and therefore that of goodness, has its source in the appeal which ends make to our impulsive nature, the same source which makes them an original object of desire or occasion of satisfaction. The ethical superiority of approval over mere desire lies in the fact that it is a reflective judgment. This doctrine is to be distinguished from that of historical hedonism.] **C. A. Richardson.** 'The Notion of a Deterministic System.' [The material world can be regarded as a deterministic system only if we isolate it from mind. But the universe contains subjects of experience, which cannot be reasonably said to be either determined or not determined: hence the universe is not a deterministic system. This argument is clinched by appeal to freedom of the will, *i.e.*, to the fact that purposes and interests are hidden in the individuality of the man.] Discussion. **J. Lindsay.** 'The Formal Ego.' [Critique of Pringle-Pattison. Form and content are inextricably interwoven, and to make abstraction of the formal ego from the knowledge-relation is a violent cleavage of the ego, which in fact is one and indivisible.] **A. K. Rogers.** 'Mr. Moore's Refutation of Idealism.' [Moore's whole argument turns on the equivocation of conscious or psychical reality as an existent, an ontological fact, and consciousness as a term of knowledge, or epistemology.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.—Vol. xxviii., No. 2. **M. W. Calkins.** 'The Personalistic Conception of Nature.' [(1) Psychological vitalism, or personalism, is the best antidote, to materialistic mechanism; it is, *e.g.*, a superior alternative to Hoernle's teleological vitalism. (2) A complete personalistic cosmology must maintain idealism against both dualism and materialism; personalism against ideistic idealism; and a non-solipsistic or non-subjective form of personalism. The writer indicates summarily the outline of her argument under these three heads. (3) Suggestions by Leibniz and Royce lead to the distinction of three types of selves, as viewed from the human standpoint: the intercommunicating, the communicating, and the uncommunicating. (An excursus deals with the personalistic conception of the body, as phenomenal sign of me, as felt by me alone, and as inferred object containing spleen, liver, etc.) (4) Personalism is not to be confused with preanimism, phenomenalism, or the doctrine of a lawless universe; moreover, the dynamic theories of recent physics indicate that the concept of the conscious self lies at the core of speculative science.] **N. Wilde.** 'The

Development of Coleridge's Thought.' [Coleridge was a Platonist of the mystic type, for a few years intellectually entangled with associationalism, and later charmed by the technical vocabulary of German transcendentalism; but always at heart a continuer of the tradition of Hooker and the Cambridge Platonists, and alien to the trend of the 18th century.] **J. C. Gregory.** 'Mind, Body, Theism, and Immortality.' [Life and mind sprang out of matter and have remained in connexion with it; but, in spite of interdependence, have developed in accordance with their own principles and nature. This development suggests that mind may achieve independence, and thus survive the death of the body. There is nothing in evolution to negate theism.] **H. A. Overstreet.** 'Proceedings of the American Philosophical Association: the Eighteenth Annual Meeting, Harvard University, December 27, 28, 1918.' Reviews of Books. Notices of New Books. Summaries of Articles. Notes. Vol. xxviii., No. 3. **A. K. Rogers.** 'Essence and Existence.' [The knowledge-situation includes objective existent, mental existent, meaning (character, essence) and mental act. Meaning may be disengaged by selective attention from both existents; the correspondence of the two meanings is then due to the relation of active tension between organism and environment. Symbolic meaning or sense of direction is always reducible to the concrete; existence is directly vouched for by inner experience.] **H. E. Barnes.** 'The Philosophy of the State in the Writings of Gabriel Tarde.' [Tarde is concerned particularly to explain the origin and transformation of political authority. Although his tendency is strongly psychological, the treatment of these problems is historical or genetic rather than analytical.] **H. E. Cunningham.** 'Analysis as a Method of Philosophy.' [The analytic method as treated in Holt's *Concept of Consciousness* cannot be applied, since it turns out that there are no means of applying it; and the same method as applied to philosophical problems in Russell's *Scientific Method in Philosophy* is involved in a circle.] Discussion. **B. Bosanquet.** 'Appearance and Reality and the Solution of Problems.' [Sound philosophy aims to interpret and revalue the world of appearance rather than to construct a second and alien world; and modern idealism conforms to this procedure.] **W. P. Montague.** 'The Conflicts of Reason and Sense; a Rejoinder to Dr. Bosanquet.' [The antinomy of reason and sense is fact, historical and present; and the idealistic absolute is not valid and immanent but transcendent and irrelevant.] **K. Gilbert.** 'Philosophical Idealism and Current Practice.' [Bosanquet over-estimates practice; the generation is complacent and not self-critical.] Reviews of Books. Notes of New Books. Summaries of Articles. Notes. Vol. xxviii., No. 4. **H. W. Wright.** 'The Social Significance of Education.' [Within the continuity of biological process types of imagery that originally had only survival-value have been put to rational and social ends. Language, constructing a socially accepted system of knowledge, makes for intellectual insight and spiritual vision; technical devices further human co-operation, and thus acquire ethical significance; art tends to sympathy and rational concord. Hence the educator must remember that he deals with social selves, and that the work of education is to make men capable of rational intercourse and to bring out whatever powers they have of enlarging the scope of the rational order.] **B. I. Gilman.** 'The Logic of Cosmology.' [Either there is no soul, and therefore no cosmos; or there is no hing but soul, in which case the cosmos is potentially tripartite. For a universal soul may exist beneath every individual soul; or every individual beneath a universal; or these correlative conceptions may be combined.] **D. T. Howard.** 'The Descriptive Method in Philosophy.' [The pragmatist definition of experience,

which is open to the logical charge of *hysteron proteron*, may be tested in the instance of Thought, a process in experience. We find that the 'descriptive method' is left vague, with illustration offered in place of description; and we find that thought is taken indirectly,—biologically, sociologically, anyhow rather than directly, that is, logically.] **J. L. Mursell.** 'The Function of Intuition in Descartes' Philosophy of Science.' [Intuition means for Descartes the actual practice and procedure of the expert scientific investigator; its correlative simple natures are universals. Methodologically, his approach to the problem of externality would lead to a subjectivism; but while he would not have taken seriously the view ordinarily ascribed to him, he has no other explicitly and consistently worked out.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xxv., No. 5. **S. B. Russell.** 'Communication, Correspondence, and Consciousness.' [Consciousness relates primarily to environment, and depends upon mechanisms for communication and mechanisms of correspondence. The latter are mimetic (perceptive) and image processes, which depend upon complex nerve-mechanisms composed largely of mechanisms of associative memory.] **L. T. Troland.** 'The Heterochromatic Differential Threshold for Brightness: II. Theoretical.' [The heterochromatic factor (heterochromatic limen referred to homochromatic as unity) is greater for antagonistic than for non-antagonistic pairs, and greater for warm-cold than for warm-warm or cold-cold pairs. The results suggest the use of circular notation rather than that of linear symbolism (colour pyramid) to represent the relations of the hues. Oscillation of the axes in respect to which definite hues and luminosities are measured indicates the advantage of flicker photometry over direct comparison. The paper ends with a consideration of the measures of variation.] **H. B. Reed.** 'Associative Aids: III. Their Relation to the Theory of Thought and to Methodology in Psychology.' [The intentional and the sensationalistic theories of thought are alike unnecessary and inadequate. Thought is merely a stage in habit-formation, beginning with a problem and ending with a habit; it works by means of associations, which disappear as the work draws to completion. The method of objective or common-sense report is superior to that of psychological description.] **R. Pintner.** 'Community of Ideas.' [Repetition of the Boring-Whipple test with university students, school-children of 13 and over, and school-children of 12 and below. The responses show little variability; there is great similarity between children and adults; the frequency-percentages of the commonest responses are highly stable.] **C. Rahn.** 'Psycho-analytic Concepts and Re-education.' [There are four factors in psychical healing: diagnosis, enthusiasm, the formation of an ideal of behaviour, and the creation of an attitude that favours re-education. The Freudians secure enthusiasm; their picture of the normal state functions in the same way as the 'instruction' in the psychological laboratory; their concept of the *libido* has a high stimulus-value as a releaser of energy. But this value says nothing of the scientific content of the concept.]—Vol. xxv., No. 6. **E. C. Tolman.** 'Nerve Process and Cognition.' [Cognition consists in the placing of the given object in a setting: neurologically, in the activity of a specific (specifically interrelated) path in the association neurones. The cognitive experience is a meaning *plus* (in the case of sense-qualities) a raw feel.] **J. Peterson.** 'Experiments in Rational Learning.' [Experiments on the learning of random connexions of the numbers 1 to 10 with the letters A to J. The method promises results, not only for the estimation of general intelligence, but also for the analysis of traits of

character. Rational learning appears to differ from trial and error only in the explicitness with which the elements of the situation are reacted to and retained for later use.] **E. A. Esper.** 'A Contribution to the Experimental Study of Analogy.' [Extended repetition of the work of Thumb and Marbe. The most frequent associations are the most rapid; words of a given category are associated predominantly to words of the same category; English and German associations correspond for most words of familiar meaning and general use; children and uneducated adults have longer reaction-times than educated adults, but the associations are essentially similar.] **H. S. Langfeld.** 'Judgments of Facial Expression and Suggestion.' [Preliminary experiments with selected pictures from Rudolf's *Ausdruck des Menschen*. There is promise of a rank-order of recognitions (laughter, amazement, and bodily pain are the most easily recognised expressions) and of a quantitative differentiation of suggestibility.]—Vol. xxvi., No. 1. **J. R. Kantor.** 'Psychology as a Science of Critical Evaluation.' [Critique of mental chemism and behaviourism. The critical evaluative function, which constitutes scientific activity, is an amplification of experienced events, and makes for consistent control of the further progress of experience. Psychology must apply this function to conscious behaviour.] **C. E. Ferree** and **G. Rand.** 'Chromatic Thresholds of Sensation from Centre to Periphery of the Retina and their Bearing on Colour Theory: I. [Determination of the chromatic limens (R, G, B, Y) in terms of energy at near-lying points from centre to periphery along the temporal and nasal meridians. Discussion of irregularities in the curve of sensitivity for the different colours in a given meridian; of differences in sensitivity at corresponding points (especially the more remote) of the two meridians tested; of the non-uniformity of ratio of sensitivity to the pairs R-G, B-Y, from centre to periphery; and of the correspondence of distribution of sensitivity to R, G, Y with changes in the colour-tone of R and G from centre to periphery.] **F. A. C. Perrin.** 'The Learning Curves for the Analogies and the Mirror-Reading Tests.' [The results are alike as regards initial slope of curve, greater improvement and greater variability of inferior subjects, and reliability of initial scores as indices of accomplishment; yet there is no correlation between the rankings of the subjects. The positive results indicate that intelligence should be defined in terms of immediate adjustment, and not in terms of capacity for improvement; the negative, that explanation must be sought in the nature of the tests themselves, and not in the personnel of the practising group.] **C. L. Hull** and **R. B. Montgomery.** 'An Experimental Investigation of Certain Alleged Relations between Character and Handwriting.' [Six traits of character show no correlation with their alleged graphological indices.] **C. H. Griffitts** and **W. J. Baumgartner.** 'The Correlation between Visualisation and Brightness Discrimination.' [Correlation is slightly positive; but differences in visualisation cannot be referred to differences in visual sensitivity. There is no correlation of brightness discrimination with memory for letters and digits or speed of multiplication.]

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. xxix., No. 4. **A. Berliner.** 'The Influence of Mental Work on the Visual Memory Image.' [A comparison of morning and evening images, and of images before and after a short period of intensive work, shows that imagery suffers from mental work. The best indices are the time an image can be kept, and the duration of the single image.] **W. R. Wells.** 'The Theory of Recapitulation and the Religious and Moral Discipline of Children.' [Childhood and early youth correspond with the primitive religions, later youth with the morality religions, and adolescence with the rise of the redemptive

religions. The adoption of this correspondence suggests a reconciliation of Hall's and Dewey's views regarding discipline and tabus.] **W. R. Wells.** 'The Biological Value of Religious Belief.' [The primary values are moral and hygienic; secondary values are industrial, scientific, artistic, legal, and social.] **A. Schinz.** 'Intellectualism *versus* Intuitionism in French philosophy since the war.' [French philosophy before the war was tending to sentimental socialism (Jaurès), moralism (Boutroux), and intuitionism (Bergson). The revolt has been begun by Benda (*Sentiments de Critias*) and Lote (*Leçons intellectuelles de la guerre*).] **C. L. Friedline.** 'The Discrimination of Cutaneous Patterns below the Two-point Limen.' [If the stimulus-error is admitted, and the impressions are taken as cutaneous objects, an extreme delicacy of discrimination may be attained. The considerable changes in the limen hitherto ascribed to practice and fatigue depend in all probability on shift of the subject's attitude toward such cutaneous objects.] **P. T. Young.** 'The Localisation of Feeling.' [Pleasantness and unpleasantness are not localisable. Localisation and extent, as well as qualitative differences of 'feeling,' are due to the sensory components of the unanalysed object-feeling of common sense.] **H. B. Smith.** 'Aristotle's Other Logic.' [The classical scheme of inference is a special case of a more general system (the semi-Aristotelian system) which admits 'nothing' and 'universe' as possible meanings of terms.] **J. F. Dashiell.** 'Sixteen Origins of the Mind.' [A sketch-list, without documents, of possible derivations of the category of the 'mental'.] **E. B. Titchener and H. P. Weld.** 'Minor Studies from the Psychological Laboratory of Cornell University.' **F. Cutolo.** 'xliii., A Preliminary Study of the Psychology of Heat.' [Heat, which results from the simultaneous stimulation of warm and cold spots, lies in a qualitative series between pressure and pain.] **A. S. Phelps.** 'The Mental Duet.' [Man and woman differ as distributive and secretive, aggressive and receptive, rational (inductive-deductive) and intuitive (instinctive-imaginative).] Book Reviews. Book Notes.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. xvi., 6. **W. Fite.** 'Felix Adler's Philosophy of Life.' [A lucid and readable review of Adler's *An Ethical Philosophy of Life*.] **F. J. Teggart.** 'The Approach to the Study of Man.' [Demands a scientific attitude.] **K. Dunlop.** 'Scientific Prepossession and Anti-Scientific Animus.' [A reply to Warner Fite's attack on laboratory psychology in the *Atlantic Monthly* of December, 1918.] **A. A. Merrill.** 'Prediction and Spontaneity.' [Prediction is only possible where the time of the prediction is irrelevant to what is predicted.] xvi., 7. **G. A. Tawney.** 'Logic as the Science of the Pure Concept.' [An enthusiastic review of Croce]. **H. S. Jennings.** 'Experimental Determinism and Human Conduct.' ["It implies only that if what now occurs were different, the earlier conditions would have been different."] **J. E. Turner.** 'Dr. Dawes Hicks on Reality and Its Appearances.' [Denies that his theory works out.] xvi., 8. **J. H. Leuba.** 'The Yoga System of Mental Concentration and Religious Mysticism. [Reviews the translation of Patanjali by J. H. Woods, and compares the methods and aims of Yoga with those of drug-intoxication and religious mysticism.] **J. Warbeke.** 'A Medieval Aspect of Pragmatism.' [Argues that it implies an objective and man-centered teleology.] **W. M. Salter.** 'Mr. Marshall on Outer-World Objects.' [Comment on Rutgers Marshall in xvi., 2.] xvi., 9. **A. H. Lloyd.** 'Luther and Macchiavelli, Kant and Frederick.' ["Frederick while outwardly perhaps resembling Kant, really inverted the Kantian emphasis, as aforetime Macchiavelli had inverted the emphasis of Luther."] **J. R. Kantor.** 'Human Personality and Its Pathology.' [A classificatory paper mainly,

which contains however a suggestion that the dissociated "differ from normal persons who of course always comprise numerous selves, in that the latter have their experiences unified and harmonious. The various selves represent responses to varying surrounding conditions, all of which are threads of a common fabric. In the dissociated personalities there are different weaves which may become disjointed."] **H. B. Alexander.** 'Wrath and Ruth.' [A rhapsody on the War which ends with the suggestion that the birds will outlast man.] **W. R. Wells.** 'The Biological Foundations of Belief.' [A reply to Schiller in xv., 19, which, while claiming agreement with him as to the biological foundations of beliefs, declares that "one goes contrary to established usage of the term 'truth,' if one asserts that the truth of beliefs is tested by their survival-value," because "common sense and science assert that 'truth is so' whether or not it is known by any human mind."] **E. C. Parsons.** 'Teshlatiwa at Zuñi.' [An account of fear of the dead among Pueblo Indians.] xvi., 11. **H. T. Costello.** 'The Value of False Philosophies.' [Thinks that the errors of philosophers "are seldom to be dwelt upon, but the tone and colour and flavour of their vision are a priceless heritage, a new glory that is given to all mankind."] **S. A. Elkus.** 'Purpose as a Conscious Concept.' [Criticises the method H. C. Warren's 'Study of Purpose' in xii., 1, 2, in reducing purposive to mechanical action. It is shown that the description of a purposive act as one in which the idea precedes the perception instead of *vice versa*, involves an ambiguous use of 'idea'. The 'idea' which *follows* perception is simply representative of a specific perception, whereas that which precedes is "representation plus a prospective element" and means to refer to the future. Thus there is a 'present future' in the purposive 'idea'. Also Warren continually commits the 'psychologist's fallacy.'] **G. A. de Laguna.** 'Dualism and Animal Psychology, A Rejoinder.' [To Washburn in xvi., 2; points out that taken methodologically, not metaphysically, behaviourism is simply the scientific demand for definite identifiable conditions of experiment, and as such must treat the 'introspections' of the 'dualist' as 'responses' to be interpreted. At the same time it is admitted that actual behaviourists have not yet given adequate interpretations especially of 'sensations'; still "behaviourism offers the only promising theoretical basis for a fruitful analysis of the nature and limits of introspection." It need not be 'mechanistic' because the responses studied are too complex to be interpreted by the mechanical categories.] xvi., 12. **J. H. Randall, jun.** 'Instrumentalism and Mythology.' ["Mythology or philosophy (for philosophy is simply mythology grown less colourful and more respectable) serves two important functions: it enables man to create a world congenial to his own personality . . . and also serves for the creation of new facts in the world of existence, for the moulding of that world to the will of man." Pragmatism too must make its myths of 'consolation' and 'control'.] **W. D. Wallis.** 'The Objectivity of Pleasure.' [Denies that every man is "the infallible judge of whether or not he is experiencing pleasure," and defines pleasure as "the doing of a thing for its own sake". 'True' pleasure will then be "that which should be done for its own sake". How this is to be determined is postponed.] **W. H. Sheldon.** 'Dr. Goldenweiser and Historical Indeterminism.' [*Cf.* xv., 20, 21. Thinks that Goldenweiser unconsciously proves the indeterminism he disclaims.] xvi., 13. **G. A. Barrow.** 'A Defect in the Argument for Realism.' [Criticises as merely negative the search for "things as they really are unmodified and unconstituted by the act of knowing," and requires realism to produce an account of relations other than a denial of their reality.] **J. L. Mursell.** 'The Critical Philosophy and the Theory

of Types.' [The contention that Kantian Philosophy is radically vitiated by 'reflexive' and 'vicious circle' fallacies would be more persuasive if the author had deigned to illustrate precisely *how*, instead of merely deducing that it must be because it makes assertions about the totality of propositions.] This number also contains an interesting syllabus of eight lectures on the 'Problems of Philosophic Reconstruction' delivered by **Prof. Dewey** at the Imperial University of Tokyo in February and March, 1919. xvi., 14. **W. H. Sheldon.** 'The Defect of Current Democracy.' [Social cowardice, which suppresses the independent and superior individuals necessary to progress.] **H. B. Smith.** 'On the extension of the Common Logic.' [By setting aside "the restriction that the terms of the syllogism shall remain distinct".] **W. D. Wallis.** 'What is Real Pleasure?' ["The pleasure which is truly and not falsely pleasure, reality and not illusion, is that pleasure which is part of the larger pleasure, namely the realisation of our purposes." *What* purposes? is not discussed.]

ARCHIVES DE PSYCHOLOGIE. Tome xvi., No. 3. **C. Jéquier.** 'L'emploi du calcul des probabilités en psychologie.' [Written for psychologists, and useful not only mathematically, but also because of its insistence on the tacit assumption of equality of probabilities *a priori*, on the conflict between the laws of homogeneity and of large numbers, on the necessity of exercising judgment.] Recueil des Faits : Documents et Discussions. **E. Claparède.** 'Rêve satisfaisant un desir organique.' [A dream which expresses overtly the desire for fresh air.] **C. Werner.** 'XII^me^ Réunion des Philosophes de la Suisse romande.' [Discussion of Benrubi's paper on integral knowledge.] Bibliographie. Tome xvi., No. 4. **P. Bovet.** 'L'Institut J. J. Rousseau (1912-1917).' [Review of accomplishment and prospects of the Institute, as school, as research laboratory, as bureau of information, and as centre of propaganda.] **A. Descoeudres.** 'Enquête sur l'évaluation subjective de quelques tests de Binet-Simon.' [The ratings by 24 competent judges of the results of 3 tests reveal individual differences which, in addition to their theoretical importance, may be of practical weight when the tests are used to distinguish normal and abnormal children. More regard should be paid to the rules laid down by Binet and Simon themselves.] **J. L. Des Bancels.** 'La conversation des images et les théories de la mémoire.' [There are two principal theories of memory, Bergson's doctrine of survival of the past and the theory of cerebral traces ; psychology cannot decide between them.] **E. Claparede.** 'Chronoscope à usages multiples : "l'électro-chronoscope enregistreur de Dégallier".' Bibliographie. Nécrologie. Tome xvii., No. 1. **F. Naville.** 'Mémoires d'un médecin aphasique : auto-observation et notes psychologiques du Dr. Saloz père, de Genève, atteint d'aphasie totale suivie de guérison.' [In 1911, at the age of 60, Dr. Saloz was suddenly struck by a total motor aphasia (word-blindness, agraphia, right hemianopsia, right hemianaesthesia, motor apraxia : no hemiplegia, hardly any word-deafness). After some weeks a few words came back, whereupon the patient set himself the laborious task of self-reeducation. Cure was effected : and Dr. Saloz, who lived to 1917, left copious notes of his case. Extracts from these notes are here given, bearing on the patient's first impressions of his illness, his progressive recovery of internal speech, his diagnosis, and his views of aphasia in general and of his own seizure in particular. The extracts are annotated by Dr. Naville. A valuable paper.] **J. L. Des Bancels.** 'Sur les origines de la notion d'âme : à propos d'une interdiction de Pythagore.' [Diogenes Laertius explains the pythagorean tabu of beans on the ground that, being windy, they

partake of the nature of the soul. There is, in fact, no reason to confine the early notion of soul to the breath, to the exclusion of intestinal flatulence. But Jones' thesis that the breath is merely a 'symbol' of flatulence cannot be maintained.] **E. Claparede.** 'La conscience de la ressemblance et de la différence chez l'enfant.' [Consciousness of difference appears earlier and more readily than that of resemblance. But resemblance is primary: the individual's consciousness of a relation appears the later, the earlier his behaviour has implied the automatic, instinctive, unconscious use of that relation.] Bibliographie.

ZEITSCHRIFT F. PSYCHOLOGIE. Bd. lxxvi., Heft 5 u. 6. **R. H. Goldschmidt.** 'Beobachtungen ueber exemplarische subjektive optische Phænomene.' [A 'typical' subjective visual phenomenon is defined, provisionally, in Purkinje's way, as subjective both in apprehension and in origin. After an introductory review of Purkinje's work, and a brief mention of J. Mueller, the writer proceeds to his own observations: the typical subjective phenomenon is described in great detail under the headings of qualitative character (light and colour), configuration, localisation, field of vision (here is interpolated a comparison with dream-images), fluctuation and movement. The paper ends with a sketch of qualitative methods of studying the phenomena, and with remarks on the bearing of such study upon general psychology.] Literaturbericht. Bd. lxxvii., Heft. 1 u. 2. **M. Jacobsson.** 'Ueber die Erkennbarkeit optischer Figuren bei gleichem Netzhautbild und verschiedener scheinbarer Groesse.' [Experiments upon adults and children, with direct vision and instantaneous exposure of stimuli, show that in the case both of simple and of complex forms (strokes, letters, numerals) the small and near are in general more readily cognised than the large and distant. There are, however, individual differences. The results stand in connexion with the Aubert-Foerster phenomenon, Koster's law, and certain work of Jaensch. Of the three typical theories, physiological, attentional, associational, the writer inclines tentatively towards the physiological.] **H. J. F. W. Brugmans und G. Heymans.** 'Versuche ueber Benennungs- und Lesezeiten.' [Brown had found that the naming of objects requires a longer time than the reading of the corresponding words, and had referred the explanation to physiology. The writers, by variation of the experiments, show that the temporal difference is not explicable by strength of association due to practice nor by definite direction (with reduced inhibition) of association, but that it is fully accounted for by differences of attitude (*Einstellung*).] **J. Plassmann.** 'Sækulare Verænderlichkeit des Dezimalfehlers.' [Results of comparison of watch with astronomical clock from 1904 to 1916. Nearly all the odd tenths (1, 3. 5, 9) are under-observed, together with one even tenth (4). The over-observed tenths show fluctuations of long period; thus the 0 rises to a plateau, stays there for a time, and thereafter rises again: the 7 drops till 1908 and thereafter steadily rises, etc.] Literaturbericht. Bd. lxxix., Heft 1, bis 3. **H. H. Gehrcke,** bearbeitet von **G. E. Mueller.** 'Versuche ueber das Verhalten der Auffassungsfaehigkeit gegenueber verschiedenen Gruppierungen schnell nacheinander durch das Gesichtsfeld gefuehrter Buchstabenkomplexe.' [Experiments upon the apprehension of linear series of three-letter syllables, variously spaced and speeded, under the instruction to mark the appearance of a certain vowel (or of certain vowels) by a simple speech-reaction. Errors are mainly conditioned upon expectation and perceptive indistinctness, which latter is conditioned, again, objectively upon period of visibility and subjectively upon attention and eye-movement. A general result is that uniform spacing of the syllables in a line is not the optimal arrangement.] **W. Baade.** 'Selbstbeobachtung

und Introvokation.' [Further discussion of the method of interruption or 'introvocation,' whose essential point is that an intercurrent stimulus serves as signal to the observer to shift from the task set him to introspective observation of his just-past consciousness, and of the instruments (especially time-recording instruments) necessary to it. Analysis of the previous results of Baxt and Schumann.] **W. Baade.** 'Experimentelle Untersuchungen zur darstellenden Psychologie des Wahrnehmungsprozesses.' [Experiments upon simple visual and tactual perceptions by the method of introvocation. The phase of the perceptive process which precedes speech falls into two sub-phases: the original (bare seeing or feeling) and the progressive (cognition without words). As the former is based on sensation and after-image, so is the latter (in these experiments) based invariably upon a memory-image. Becher's results, however, make it necessary to pursue further the question of an imageless progressive phase.] Literaturbericht. Bd. lxxix., Heft 4, bis 6. **S. Witasek,** bearbeitet von **A. Fischer.** 'Assoziation und Gestalteinprägung: Experimentelle Untersuchungen.' [Experiments with meaningless syllables and artificial words, designed to test G. E. Mueller's theory of the formation of complexes in learning. The results show that the complex is a matter neither of pure 'collective apprehension' nor of association (associations may, incidentally, either help or hinder), but rather of the emerging of a form (*Gestalt*). Temporal approximation of the components seems (within limits) to be without effect.] **G. Heymans.** 'In Sachen des psychischen Monismus, v.' [Reply to Becher. The objections of detail (simplicity of mind *vs.* complexity of brain, impermanence *vs.* permanence, etc.) may be met by counter-arguments based on analogy (description of simple quality in words) or on appeal to cognate facts (physical energy as permanent). In general, the correspondence need not be restricted to the unity of the individual central-consciousness.] **R. Hennig.** 'Lektuere-Vorstellungsbilder und ihre Entstehung.' [Visual images aroused by the reading of novels, plays, etc., conform in fundamental plan to the rooms and garden familiar to the writer from the third to the eighth year of his life.] Literaturbericht. Bd. lxxx., Heft 1, bis 3. **J. Wagner.** 'Experimentelle Beitraege zur Psychologie des Lesens.' [Tachistoscopic experiments, designed to test the conclusion of Erdmann and Dodge that with momentary exposure only 6 to 7 letters, but 21 familiar words, can be clearly cognised. It proves that the same number (20) of either letters or words may be perceived, provided that attention covers the whole area upon which the objects appear, and is not directed upon a central point of fixation. The theories of total word-form (Erdmann and Dodge) and of dominant letters (Zeitler) are thus rendered unnecessary; if gross word-form is of importance in ordinary reading, it is mainly by way of acoustic-motor images. Indirect vision is of assistance to later apprehension by direct vision.] **G. Heymans** und **E. Wiersma.** 'Beitraege zur speziellen Psychologie auf Grund einer Massenuntersuchung, viii.: Der epileptische Charakter.' [A frequent type of normal character shows the germs of what, in higher development, is the epileptic: liability to distraction and reduced activity. Both traits lead back to a labile attention, which is therefore the fundamental defect in epilepsy.] Literaturbericht.

"SCIENTIA" (RIVISTA DI SCIENZA). Series ii. Vol. xxv. March, 1919. **J. L. E. Dreyer.** 'The Place of Tycho Brahe in the History of Astronomy.' **Luigi De Marchi.** 'La rappresentazione della superficie terrestre.' **Ingvar Jörgensen** and **Walter Stiles.** 'L'état actual du problème de l'assimilation du carbone. **Charles Gide.** 'L'Europe de demain.' **A. Pearce Higgins.** 'La ligue de Nations libres.' Critical Note.

L. Houllevigue. 'Le grand péril de la Science.' [On the present danger of the partial or total disappearance of scientific work.] Book Reviews. General Review. **Roberto Assagioli.** 'L'école psychopathologique américaine.' [A study of the American psychopathological school headed by Prof. Morton Prince. Prince's book *The Dissociation of a Personality* (New York and London), on Miss Beauchamp's case is referred to, and also the papers of B. C. A. on "My Life as a Dissociated Personality" and of Prince on "The Unconscious" in the *Journal of Abnormal Psychology* for 1908-1909. Further, the work of Boris Sidis (*Psychopathological Researches: Studies in Mental Dissociation*, New York, 1902, and "The Psychotherapeutic Value of the Hypnoidal State" in the above *Journal* for 1909-1910) and J. J. Putnam (in the above *Journal* for 1911-1912, the *British Medical Journal* for 1906 and the *American Journal of Medical Sciences* for 1908) are mentioned.] Review of Reviews. Chronicle. French translations of articles in Italian and English. Series ii. Vol. xxv. April, 1919. **W. E. Harper.** 'Knowledge of the Stars obtained by Means of the Spectroscope.' **E. Rabaud.** 'Evolution et sexualité.' **Elias Lattes.** 'L'enigma etrusco.' **L. Havet.** 'Guerre sans analogues, paix sans analogues' **H. Goudy.** 'Une ligue de Nations.' Critical Note. **A. Mieli.** 'Synthèses et visions d'histoire de la science.' [Principally occupied with Libby's *Introduction to the History of Science* (London, 1918), which does not seem to be a very valuable work.] Book Reviews. Review of Reviews. Chronicle. French translations of articles in English and Italian. Series ii. Vol. xxv. May, 1919. **G. Loria.** 'Le matematiche in Ispagna, ieri ed oggi. Parte I^{a}: Dalsecolo XVI alla metà del XIX.' **H. Thomson.** 'The Planet Mars.' **G. Bohn.** 'Une orientation nouvelle de la Biologie.' **F. Savorgnan.** 'L'influence de la guerre sur le mouvement naturel de la population.' **A. Pillet.** 'Que faut-il penser de l'établissement d'une Société des Nations?' Critical Note. **G. C. Buzzati.** 'Pour le développement de l'histoire du droit international.' Book Reviews. Review of Reviews. French translations of articles in Italian and English. Series ii. Vol. xxv. June, 1919. **G. Loria.** 'Le matematiche in Ispagna, ieri ed oggi. Parte II^{a}: I matematici moderni.' **W. C. McC. Lewis.** 'Radiation, the fundamental factor in all chemical change.' [With regard to the very recent application of the quantum theory of radiation to chemical reactivity, 'the results so far obtained are sufficient to give very strong *prima facie* grounds for the general truth and applicability of the concept that the radiation necessarily present in material systems (in virtue of their temperature) is the fundamental source of chemical change of all kinds.'] **A. Meillet.** 'Le genre grammatical et l'élimination de la flexion.' [A study in comparative linguistics.] **A. Loisy.** 'La Société des Nations et la religion de l'humanité.' **S. Gemma.** 'Pour la création d'une Société des Nations.' Critical Note. **L. Amaduzzi.** 'Le champ magnétique comme moyen d'étude de la Physique atomique.' [On the subject of a recent book by Augusto Righi.] Book Reviews. Review of Reviews. French translations of articles in Italian and English. Index to vol. xxv.

X.—NOTE.

THE NOTION OF A GENERAL WILL.

In a recent review of an article by Prof. Bosanquet I made some disparaging observations about the General Will. It is one of the defects of reviews that considerations of space compel a reviewer either to confine himself to platitudes or to make assertions in a rather dogmatic tone without offering adequate reasons or marking delicate shades of difference. This fact, and certainly not any lack of respect for Prof. Bosanquet, was the cause of some sentences which are perhaps wanting in urbanity. I am quite sure that, when Prof. Bosanquet or Rousseau talk of the general will, they must be referring to something real and important; but I cannot detect anything that they might mean which seems to me appropriately called by this name. And assertions are made about this general will which seem incompatible with any meaning that I might otherwise be inclined to attach to the phrase. Hence I can only conclude that the *name* is a very unfortunate one, or else that there is something highly important in human societies which may appropriately be termed a *will* but which has wholly escaped my notice. It may just be worth while for me to state shortly the difficulties that I feel about the whole notion. They are so obvious and platitudinous that they cannot possibly have escaped Prof. Bosanquet's attention, and therefore I am sure that he must have some definition of the general will in his mind which is not exposed to these objections. But I do not know what this may be, and many other people of fair intelligence appear to be in the same difficulty, so that some further explanation from him seems highly desirable.

Let us begin by considering the will of a definite Englishman, Smith, a stockbroker living in Brighton. I take it that we mean by Smith's will the complex or system of Smith's particular volitions. He wants various things at various times, and these wants and his efforts to satisfy them are events with a certain place in his mental history. When we survey them we find that a great number of them, at any rate, are connected with each other in a rational way; and this system of connected volitions, or the organising principles of the system, are what I understand by Smith's will. Now, when I talk of Smith's will, I am under no obligation to regard him in abstraction from England, Brighton, and the stock-exchange. I know quite well that each of his volitions depends upon many conditions, that they would have been differently organised if he had been born and brought up and had lived in a different society or had occupied a different position in his society. This I take to be common ground. Hence, if you were to call Smith's actual will the general will and confine the name *Smith's will* to the supposed system of volitions that would have remained the same in whatever condition Smith had been placed, it would be a truism to say that Smith's will is abstract and fragmentary compared with the general will. But this would be a very odd way of speaking. It would be equally odd to call a hypothetical will that Smith might have had under imaginary conditions

Smith's will, and to call the will which Smith actually has under the actual conditions *the general will*. Nor would the general will, in this sense, throw much light on the nature of a society of people of whom Smith is only one member. Hence I conclude that this interpretation cannot be Prof. Bosanquet's though it would account for some of his statements.

Having said what I understand by a man's will I will next consider in what sense it seems to me that a will can be called general. In the first place you might say that Smith's will was general as compared with his particular volitions. Any one of his particular volitions is certainly fragmentary (and I think, in Prof. Bosanquet's sense, though not in the sense in which I should use the word, abstract) as compared with his will. But again this cannot be the fact that Prof. Bosanquet is referring to, for he does not say that each man's volitions are fragmentary and abstract as compared with that man's will, but that each man's will is fragmentary and abstract as compared with the general will.

The second possible meaning of a general will refers to the wills of several persons. Smith and Jones may be said to will the same thing under certain circumstances. This does not of course mean that they both want the same physical object, for their wills would then be in opposition. The fact is of course that the phrase 'to want a certain physical object' is elliptical; it means to want to *possess* this object. What we will in every case is that a certain proposition or set of propositions should be true. When we say that A and B have the same will we mean that A and B both want some proposition or set of propositions p to be true. If A and B do not have the same will one wants p to be true and the other wants q to be true. Two possibilities then arise: (i) p and q may be incompatible, either for logical or physical reasons. Their wills are then in opposition; (ii) p and q may be compatible. Their wills are then mutually indifferent.

Now I suppose that there is a general will in a group of persons in so far as they all will that a certain set of propositions shall be true. But, if this be the right interpretation, I cannot understand how anyone can assert either (*a*) that the wills of various members of a group are fragmentary and abstract as compared with the general will, or (*b*) that the general will is an adequate account of any state that is or has been.

(*a*) The general will is the will of each member that a certain set of propositions shall be true. But each member also desires other propositions to be true. The object of the general will is thus a fragment of the object of any individual's will, if the general will and the will of an individual be interpreted as we have interpreted them. Prof. Bosanquet holds that the exact opposite is the fact. There seems only one way in which this could be justified. We might define Smith's *private will* as his desire for the truth of propositions other than those whose truth all members of his community desire. With this definition Smith's will (as already defined) = Smith's private will + the general will of Smith's community. Now, whilst it is impossible that Smith's will should be abstract and fragmentary as compared with the general will, it is possible that Smith's private will might stand in this relation to the general will. This would mean that the propositions which Smith desires to be true and which some other members of his community do not desire to be true are few or trivial as compared with those which all members of the community desire to be true. It is to be noted that, if this should happen to be a fact, it is not deducible from the generality of the general will or the particularity of Smith's private will; it must be established by independent observations. It might be true of A and not of B in the community C; since it depends on the extent and importance of the agreement between the members of C, and the number and importance of

A's and B's private desires. I therefore cannot see that any general rule could be laid down on the subject.

(*b*) I can make no claim whatever to that practical acquaintance with public affairs which Prof. Bosanquet has acquired by a long course of disinterested social service. Nevertheless I must venture the opinion that the general will in any state with which I am acquainted by observations or through history is abstract, negative, unenlightened, and dimly conscious. If I were asked: 'What propositions do all or nearly all Englishmen desire to be true?' I should be puzzled to find many beside the following: That everyone who will work shall have a certain minimum of comfort, that the country should not be invaded nor its government set at naught by those of other countries, that justice (variously understood) shall be administered, and that there shall be *some* definite rules about the acquirement, distribution, tenure, and bequest of property. Any attempt to particularise further about property would neglect the important differences between what socialists and others desire to be true; any attempt to particularise about the form of government would neglect the difference between those who want parliamentary rule and those who prefer some form of syndicalism. That this amount of agreement in what is willed by all is enough to constitute a state I cannot for a moment believe. The real driving force of a state seems to me to be the will of a governing class; this will is sometimes good and sometimes bad, but in normal times it gets itself obeyed unless it flagrantly opposes the general will of all its subjects or of any large and powerful section of them. The general will thus appears to me to be merely a negative limiting condition within which infinite variations are possible; and any complete theory of the state needs to explain these variations by other principles.

C. D. Broad.

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